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The Geography of Crime: Placing Geographers in the Space of Criminologists

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The Geography of Crime: Placing Geographers in the Space of Criminologists

by

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Introduction

By Anthony Piscitelli

Introduction

Ecological approaches to studying crime date back to the 1800s when the first published research examining the relationship between geography and crime appeared. The most prominent was Guerry (2002) and Quetelet (1984) who both separately examined administrative data from France show the statistical relationship between crime and social issues. Decades later in the early 1900s scholars, such as Park, Burgess and McKenzie (1925) and Shaw and McKay (Shaw & McKay, 1942, 1969), would build on these early works from a sociological perspective.

Ecological approaches to crime attempt to provide an explanation of why crime is concentrated in certain areas by examining the geographic attributes of an area and the impact of socio-economic circumstances (Stark, 1987). Ecological approaches fall primarily into three central frameworks: Routine Activity Theory (RAT), Social Disorganization Theory (SDT), and Broken Windows Theory (BWT).

RAT focuses on what explains crime in a specific location and why it occurs at a specific time. RAT does this by explaining crimes are a result of a suitable target, a motivated offender and a lack of capable guardians (Cohen & Felson, 1979). RAT considers how humans create suitable targets and how the absence and presence of different types of individuals create opportunities for crime. RAT assumes the presence of someone who wants to commit a crime without exploring their motivations or how these motivations originally arose.

SDT focuses on the sociological reasons why some areas have higher crime rates than others. This approach looks at the socio-economic conditions that cause some neighbourhoods to

have higher crime rates while also exploring why individuals in this area may be more likely to become involved in crime and delinquency (Shaw & McKay, 1942, 1969).

BWT uses sociological processes in an area as an explanation for why crime occurs at a specific location and time. The processes discussed focus on how disorder creates fear of crime and, ultimately, more disorder and crime (Wilson & Kelling, 1982). BWT assumes the presence of individuals who wish to commit crimes. However, BWT also considers how aggregate community conditions help shape a sense of community. These aggregate conditions are considered alongside the context of specific locations and communities which are at a higher risk for crime.

A fourth theoretical approach, Ecological (Dis)advantage, is worth noting when considering the spatial dimensions of crime. Ecological (Dis)advantage is a recent approach and has not gained the prominence of RAT, SDT, or BWT, nonetheless, its insights have helped to shape the direction of the five articles presented in this dissertation. St. Jean (2007) proposes Ecological (Dis)advantage as an extension of SDT and BWT. According to St. Jean (2007) offenders look for locations to commit crimes which offer advantages for the offender and, in turn, disadvantages for the victims. These specific localized advantages explain why some areas with high levels of disorder and/or low level of collective efficacy do not experience crimes.

Although Geographers have made important contributions to the study of crime (see for example Andresen, 2006; He, Páez, Liu, & Jiang, 2015; Ratcliffe, 2010; Sharpe, 2000; Spicer, Song, Brantingham, Park, & Andresen, 2016; Wang & Arnold, 2008; Woo & Joh, 2015), the field is still dominated by sociologists and criminologists (LeBeau & Leitner, 2011). This is unfortunate as geographers have a unique perspective to contribute to the study of crime.

This dissertation consists of five articles (see Table 1), starting off with an article that elaborates on *Emerging opportunities for geographers to explain the spatial distribution of crime*. It provides a broad introduction to the dissertation showing what gaps in the crime literature exist, especially those ripe for analysis by geographers. Three primary directions emerged as a focus of this dissertation: overarching theoretical contributions, specialized geographic quantitative techniques, and qualitative approaches centred on the concept of place. Two articles provide a theoretical synthesis. *Connecting social disorganization to broken windows and routine activities*, proposes a concept map addressing the question: How do BWT, SDT, and RAT conceptually relate to one another? *The social disorganization of intimate partner violence*, also delves into theoretical considerations asking the question: How can SDT help to explain intimate partner violence (IPV)? The article, *Spatial regression of juvenile delinquency: Revisiting Shaw and McKay*, uses quantitative techniques to answer the question: How do modern statistical techniques impact the results obtained by Shaw and McKay (1969) in the founding of SDT? Finally, *Distinct places to address intimate partner violence* uses a qualitative approach to explore: How do Brantford social service providers use the concept of place to address IPV?

Table #1: List of Dissertation Articles				
Article	**Title**	**Focus**	**Major Contribution**	**Dissemination Activities**
1	Emerging opportunities for geographers to explain the spatial distribution of crime	Literature Review	Describes gaps in crime literature to be addressed by geographers	Presented at *Canadian Association of Geographers of Ontario Division Annual Meeting*
2	Connecting social disorganization theory to broken windows and routine activities	Theoretical Synthesis	Integrates SDT, BWT, RAT, and Ecological (Dis)advantage into a single conceptual framework	Published in *The Canadian Geographer*
3	Spatial regression of juvenile delinquency: Revisiting Shaw and McKay	Empirical Analysis	Re-examines Shaw and McKay (1969) using modern statistical techniques	Accepted in press with the *International Journal of Criminal Justice Sciences* and data deposited in the *Inter-university Consortium for Political and Social Research*
4	The social disorganization of intimate partner violence	Theoretical Synthesis	Demonstrates how SDT explains concentrations of IPV within neighbourhoods	Presented at *Canadian Association of Geographers of Ontario Division Annual Meeting* and *Canadian Association of Geographers Annual Meeting*
5	Distinct places to address intimate partner violence	Qualitative Analysis	Explores how place and placemaking can reduce and prevent IPV	Presented at *Association for Nonprofit and Social Economy Research Annual Conference*

The first article, *Exploring opportunities for geographers to explain the spatial distribution of crime*, serves as a key conceptual link between each of the other four articles. My main thesis in this article is that geographers do indeed have a great deal to contribute to the study of crime and this should be an area of focus for geographic research. LeBeau and Leitner (2011) draw attention to the work that geographers, often studying within other disciplines, have contributed to the study of crime.

> "The research presented in this article…gives credit to geographers whose works have gained considerable respect in other academic communities. Additionally, it aims to convince geographers that they have potentially very valuable contributions to make to the study of crime. The final and most important point that this narrative is trying to make is that geography's intellectual territory has become attractive to other disciplines and fields embracing the geography and spatial analysis of crime." (LeBeau & Leitner, 2011, p. 161)

Unfortunately, as LeBeau and Leitner (2011) demonstrate geographers contributions have not always been fully recognized by geographers generally. In this first article, I attempt to build on this idea by exploring areas where geographers can provide unique contributions to the study of crime. The first article, therefore, serves as the broad introduction which conceptual links each of the next four articles. This article demonstrates a number of gaps in the literature, which can be addressed by geographers and the next four articles use different approaches to address some of these gaps. All of the other articles flow from this first article by addressing a gap in the literature from a geographic perspective.

The second article, *Connecting social disorganization theory to broken windows and routine activities* proposes a framework for integrating the three main theoretical approaches to addressing the spatial distribution of crime. This second article flows into the third and fourth articles. Article two and three both address SDT using the work of Shaw and McKay as central components. Article two and four are both theoretical articles exploring different elements of

SDT, with article two looking at the connection between SDT and other theories and article four focused on how SDT can account for IPV. This article was intended to also flow into the fifth article but the research participants responses went in an unexpected direction negating this linkage, as is described below.

The third article, *Spatial regression of juvenile delinquency: Revisiting Shaw and McKay* use modern spatial regression techniques to re-examine the work of sociologists Shaw and McKay. This article flows from article one and two as previously mentioned. It was also intended to link with article five but, as will be explained, this did not happen as anticipated.

The fourth article, *The social disorganization of intimate partner violence* proposes how SDT can work as a theoretical framework to explain the spatial distribution of IPV. The fourth article flows from the first and second articles as explained above. With respect to the fifth article, both are focused on IPV. This article also provides a partial linkage to article five, though again it was not exactly as intended. In the fourth article, the focus is on the mechanisms by which IPV can be addressed using SDT, in the fifth article the focus is on the mechanisms by which the concept of place can be used to reduce and prevent IPV.

Finally, *Distinct places to address intimate partner violence* uses the concept of place, as uniquely defined by geographers, to explain how Brantford social service agencies are addressing IPV. This article flows from the first article and complements the fourth article as previously described. It was also intended as a link to the second and third articles.

While it is possible for criminologists or sociologists to have written the articles two through four, only a geographer could write articles one and five. Article one's focus on the gaps in the literature that geographers are uniquely positioned to address represents a discipline-specific question. Article five focuses on the concept of place using a definition of place that is

unique to geographers. Criminologists and sociologists typically define place as a point on the map, such as a plaza or an individual home (Eck, 2002; Maxfield, 2011). In contrast, geography generally would consider these areas as micro-level spaces (P. L. Brantingham & Brantingham, 1981). Geographers definition of place is much deeper, encompassing the impact that people have on the physical space and the practices that occur in and a result of the space (Cresswell, 2004; Gieseking, Mangold, Katz, Low, & Saegert, 2014; Matthews & Herbert, 2008; Pred, 1985). The richer definition of place provides the conceptual tools to explore how social service agencies in Brantford are using place and placemaking to address IPV.

Conceptually these five articles can be viewed as connected through a flow chart approach (Figure #1). *Exploring opportunities for geographers to explain the spatial distribution of crime* serves as the introduction situating the research. Next, *Connecting social disorganization theory to broken windows and routine activities* serves as the literature review while also building conceptual linkages. The final three articles then branch off of the second conceptual article by focusing in on SDT. The third article, *Spatial regression of juvenile delinquency: Revisiting Shaw and McKay* explore in greater detail the work of Shaw and McKay the creators of SDT (Williams & McShane, 2004). The fourth article, *The social disorganization of intimate partner violence* explores conceptually how SDT can be applied to the issue of IPV. Finally, in the fifth article, *Distinct places to address intimate partner violence*, was intended to flow from article two while serving as the bridge between articles three and four. Originally, the intent of this article was a spatial statistical analysis of crime data in Waterloo Region comparing existing administrative data to a survey I intended to collect. However, due to the sensitive nature of my questions the Wilfrid Laurier University Research Ethics Board raised serious (and reasonable) concerns about using an interactive voice response survey to gather this data. Given

funding limitations, a smaller qualitative approach was adopted, asking how does place impact IPV.

Ideally, the connection between place and IPV would be explored through interviews with victims and perhaps also offenders of IPV. However, I do not have a social work background nor do I pose the emotional intelligence to offer the appropriate level of empathy to interview victims directly. Therefore, I developed a grounded theory process focused on service providers' perceptions of IPV and place. Research using grounded theory provides a mechanism for the research participants to share their experiences and insights to help build a new theory (Glaser, 1992; Glaser & Straus, 1967; Straus & Corbin, 1990).

In keeping true to grounded theory, my research results ultimately led the fifth article into a different and unexpected direction. Instead of answer the question how does place in a community at a meso-level or neighbourhood level influence IPV, my research participants focused on the micro-level explaining how they shaped these places to protect victims or took advantage of the unique elements of these spaces to address IPV. While these results are extremely relevant they ultimately change the nature of the intended conceptual linkages between the five articles. This and other issues are discussed in the conclusion of this dissertation.

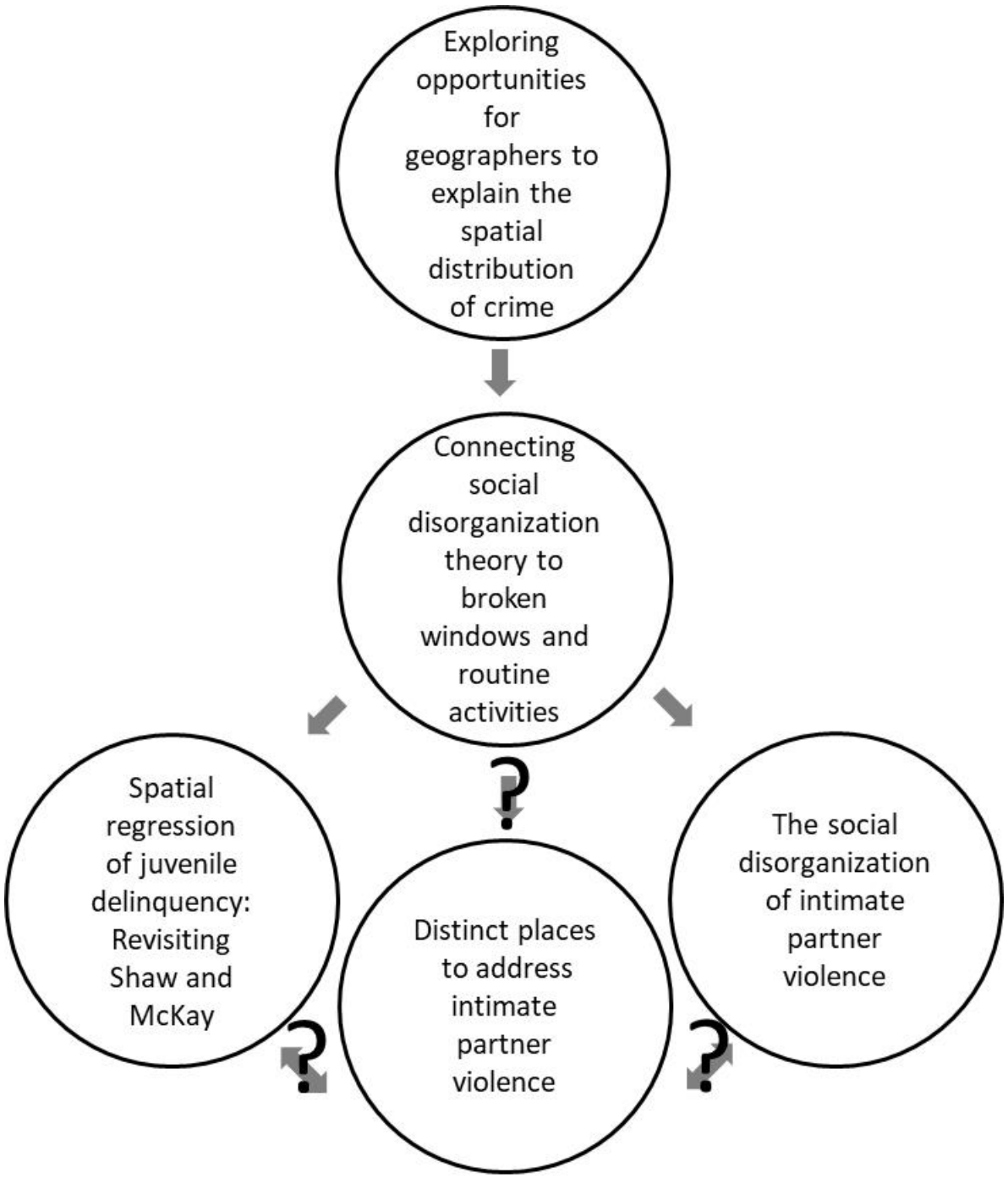

Figure #1: Flow Chart Connection Between Articles

Authorship Explanation/Disclaimer

I am the lead analyst and author on each of the five articles presented in this dissertation, and it is fair to state that all other authors served in a normal capacity as thesis supervisors, providing key guidance, comments and editorial suggestions on articles, rather than leading the analysis and writing. In determining co-authorships of these articles Sean Doherty and I used an approach adapted from the suggestions of Jean Andrey at the University of Waterloo. An analysis is made of an individual's contribution using six criteria:

1. Wrote a portion of the article
2. Secured project funding
3. Contributed conceptually to the paper
4. Collected the data
5. Analyzed the data
6. Involved significantly in editing/structuring the paper

Criteria #1 automatically qualifies someone as an author. Additional authorship is granted to anyone meeting two of the remaining criteria. These clear criteria help avoid situations with individuals who played only a limited role, such as Research Assistants who have only collected data in the field.

I am the sole author of *Emerging opportunities for geographers to explain the spatial distribution of crime*. This article has benefited from feedback from my dissertation committee and anonymous reviewers. Sean Doherty and Crystal Piscitelli, my wife, also performed some minor editing of the article. I am also the sole author of *Spatial regression of juvenile delinquency: Revisiting Shaw and McKay*. Sean Doherty and Crystal Piscitelli performed some minor editing of this article. None of these contributions warranted co-authorships on either of these two articles.

I am the lead author and Sean Doherty is the second author on *Connecting social disorganization theory to broken windows and routine activities*. Sean Doherty contributed conceptually to this article and then assisted in some significant editing of the article after I received feedback from anonymous reviewers. Crystal Piscitelli also provided a grammatical edited of this article as did Ellen Randall Editorial Assistant with The Canadian Geographer.

Sean Doherty is the second author as well on *The social disorganization of intimate partner violence*. Dr. Doherty contributed conceptually to this article and he completed a significant edit of the article. Once again my wife, Crystal Piscitelli, provided a grammatical edit of the article.

Finally, *Distinct places to address intimate partner violence* was co-authored by Sean Doherty and Stephanie Francis. Dr. Doherty assisted me in securing funding from Wilfrid Laurier University for research support from a part-time student, contributed conceptually, and was involved in editing the article. Stephanie Francis transcribed the data, offered input into the data analysis, and provided a copy edit of the article.

Each of these five articles has also been presented in other academic forums for feedback prior to this dissertation. I presented the first article, *Emerging opportunities for geographers to explain the spatial distribution of crime* at the Canadian Association of Geographers of Ontario Division Annual Meeting in Ottawa on October 24, 2015, under the title *How to Make Safer Neighbourhoods: Why Geographers Should Pay More Attention to Crime*.

The second article, *Connecting social disorganization theory to broken windows and routine activities*, has been published in *The Canadian Geographer* with Sean Doherty as the second author. The data for the third article, *Spatial regression of juvenile delinquency: Revisiting Shaw and McKay*, has been deposited into the Inter-university Consortium for

Political and Social Research data repository in Ann Arbor Michigan under the title *Map Data from 1927 to 1938 in Shaw and McKay Juvenile Delinquency in Urban Areas.*

I presented the fourth article, *The social disorganization of intimate partner violence*, twice. First, on October 29, 2016, I presented it to the Canadian Association of Geographers of Ontario Division Annual Meeting in Waterloo Ontario under the title *The Social Disorganization of Intimate Partner Violence*. Seven months later, I presented it again with Sean Doherty as the second author, to the Canadian Association of Geographers Annual Meeting on June 2, 2017, in Toronto Ontario under the title *Social Disorganization's Conceptualization of Intimate Partner Violence*.

I presented the fifth article, *Distinct places to address intimate partner violence*, on May 31, 2018, to the Association for Nonprofit and Social Economy Research Annual Conference in Regina, Saskatchewan under the title *Placing Intimate Partner Violence in Brantford.* The Royal Canadian Geographical Society through its Graduate Research Scholarships providing funding to support the research for this article.

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Chapter #1: Emerging Opportunities for Geographers to Explain the Spatial Distribution of Crime

By Anthony Piscitelli

Abstract

Over the past twenty years, academic researchers have developed significant insights into the spatial distribution of crime within cities. These contributions have included the development of three key theoretical approaches: Broken Windows Theory, Social Disorganization Theory and Routine Activity Theory. While these theories are prevalent in the criminological literature, Geographers have not given them adequate attention. Recent work shows this is changing and demonstrates the valuable contributions Geographers can make in explaining the integration of place and space with respect to crime. Through a review of these theories, this paper will identify emerging opportunities for Geographers to contribute to the study of the causes and consequences of neighbourhood crime.

Introduction

Place, space and environment are core concepts of Geography (Matthews & Herbert, 2008). Geographers answers research questions through a focus "on the space-place-environment nexus" (Matthews and Herbert, 2008, p. 17). Sociology, in contrast, examines crime from an ecological framework examining the individual level, the relationship level, the community level, and societal level as it relates to crime (World Health Organization, 2009). Criminology, follows a similar approach, focusing on the social implications of the law, theories of the causes of crime and responses to crime (White, Haines, & Eisler, 2013). Criminologists are not primarily concerned with the space-place-environment nexus, yet within criminology theories related to the spatial distribution of crime have arisen over the past twenty years including

Broken Window Theory, Social Disorganization Theory (SDT) and Routine Activity Theory (RAT).

Broken Windows Theory (BWT) argues social disorder creates fear of crime in communities which reduces the participation of law-abiding citizens creating opportunities for crime (Wilson & Kelling, 1982). In contrast, SDT primarily explains neighbourhood crime as a consequence of economic disadvantage, insufficient informal social control, lack of collective efficacy and family breakdown (Gracia, López-Quílez, Marco, Lladosa, & Lila, 2014). Whereas RAT suggests crimes occur when there is a motivated offender, a suitable target and a lack of capable guardians (Cohen & Felson, 1979).

While these theories are prevalent in criminological literature Geographers have not given them adequate treatment. This has created holes in explaining the integration of place and space with respect to crime. Questions arise as a result of these gaps:

1) What theoretical contributions could Geographers make to the criminology literature?
2) What practical applications could arise from Geographers research of crime?

This paper will start the process of answering these questions by identifying opportunities for Geographers to engage in the field of criminology.

Geographers and the Geography of Crime

LeBeau and Leitner (2011) discuss the potential for geographers to contribute to the field of criminology. They trace the history of geographer's involvement with researching crime going back to the 1970s. The review makes clear the centrality of geographers to research on the geography of crime in the 1970s, yet geographers influence wanes in prominence over the next three decades. LeBeau and Leitner (2011) note that during the 1980s and 1990s it became difficult for many geographers to find work within geography departments; for example, Lebeau

himself is working in a criminology department. Fortunately, a revival of the relevance of Geographers is taking place as recently Geography scholars, like LeBeau and Leitner, have begun to influence the discussions of crime.

Andresen (2009), a geographer studying in a criminology department, demonstrates the valuable contributions geographers can make to crime by introducing a new method to compare the degree of similarity between two spatial point patterns. While this test replicates the ability of previous tests in existence, it improves upon the existing measures by allowing an examination of results through mapping at a local level. Thus, instead of simply determining if there is a relationship between two spatial point patterns the test can allow a researcher to show if there are local variations in the strength of relationships.

Andresen and Linning (2012) demonstrate the value of this new technique using it to show that aggregating crime types in studies that try and show a spatial pattern of crime is inappropriate. Using Vancouver, Canada and Ottawa, Canada as case studies they demonstrate that a variety of crime types, such as burglary and theft from a vehicle, do not show similar spatial patterns. Similarly, de Melo, Matias and Andresen (2015) use Andresen's (2009) test to explore the concentration of crime in Campinas, Brazil. They find similar problems when aggregating crime types, thus validating the findings in a non-North American context.

Andresen and Malleson (2013) also use Andresen's (2009) spatial point pattern test to revisit the seasonality of crime patterns. They demonstrate that not only does crime demonstrate seasonal patterns but that these patterns vary spatially as well at the neighbourhood level.

Spicer, Song, Brantingham, Park and Andresen (2016) build another new method for addressing problems related to the spatial distribution of crime. Spicer et al. (2016) begin by highlighting the problem with using Euclidean geometry to measure patterns in crime; namely,

that crime tends to cluster based on road networks and proximity between crimes is better measured by distance travelled on roads rather than using a straight line. Spicer et al. (2016) suggest two solutions to identify crime patterns on street segments. The street profile method presents a graph using 50-meter buffers to demonstrate where crime is clustering on a road. The line-transect methodology borrows from ecology to demonstrate how crime patterns along one street relate to transecting streets.

Andresen (2011) also introduces a new tool, the ambient population, to improve upon crime rate calculations. Crime rates are typically calculated using the residential population as the denominator. However, while the residential population is readily available it is not always the best denominator. Instead, Andresen (2011) shows that the ambient population, which is a measure of the total number of people passing through a geographic area in a 24 hour period is a better measure for most crimes. Using Vancouver, Canada as a case study, Andresen (2011) shows that in crime rates in the downtown core of the city are lower using the ambient population calculated by Oak Ridge National Laboratory than rates calculated using residential population.

He, Paez, Liu and Jiang (2015) provide another example of the technical expertise geographers can contribute to the study of the spatial distribution of crime. He et al. (2015) evaluate the impact of averaging crime rates over time for a spatial unit of analysis. They conclude that averaging crime rates over time does not necessarily improve regression models.

Wang and Arnold (2008) show the potential of geographers to use advanced techniques to contribute to theory. They developed the localized income inequality measure to assess the impact of relative deprivation at a neighbourhood scale to predict homicide rates. Using this tool

they show income inequality can be used alongside poverty to improve predictions of homicide rates.

Woo and Joh (2015) provide an example of the practical implications of research by geographers. They demonstrate using spatial-temporal techniques that the Low-Income Housing Tax Credit program in the United States does not cause crime rates to rise in neighbourhoods where it is adopted, instead, the crime in these areas falls after the new housing developments were built. The crime rates appear high in these areas because they were much higher before the developments were built.

These recent contributions by geographers to the study of crime were foreshadowed by Sharpe (2000) and Evans (2001). Sharpe (2000), critiques crime literature's focus on crime mapping techniques which rely upon official crime statistics and argues for the need to increase the amount of literature focused upon victims and community context. Sharpe finds the current literature focuses on five areas:

> "a) spatial distributions and ecological relationships of officially recorded criminal incidents;
> b) local physical context of crime (the scene of the crime); its design characteristics and relative location;
> c) geographic origins, spatial behaviours, and environmental perceptions of offenders; attributes, behaviours, perceptions and adaptive responses of victims;
> e) spatial behaviour, territorial processes and geographic information handling of social control agencies, particularly the police, but also education, social welfare, health, legal and judicial systems" (2000, p. 424).

Sharpe suggests integrating these themes into a single theory should be a priority for geographers in the academic community. This paper extends Sharpe's discussion exploring some specific areas where criminological theories related to the spatial distribution of crime require more attention from geographers.

Geography in an article by Evans (2001) echoed Sharp's call for geographers to become more involved in researching crime suggesting break and enters, fear of crime and micro-level spaces were excellent research opportunities. Recently, as shown in the examples cited, a revival of geographer's involvement in crime has taken place. Before discussing how Geographers can continue to contribute a brief review of BWT, SDT and RAT will be provided.

Broken Windows Theory

Wilson and Kelling (1982) introduced BWT in an article in The Atlantic magazine. They extrapolated the theory from the idea that if a window of a building is broken and not quickly repaired soon other windows in the building will also be destroyed. Wilson and Kelling further propose that when neighbourhoods face "untended behavior[s]" (p. 31) community breaks down causing crime. The types of "untended behavior" which acts as the initial trigger for crime within BWT generally falls into two categories: social disorder and physical disorder. Social disorder comprises issues in a neighbourhood which involve people, such as youth loitering, public intoxication, prostitution or drug dealing. Physical disorder comprises issues involving the physical environment, such as graffiti, litter or unrepaired damage. Increases in social and physical disorder in a neighbourhood generally lead to increases in fear of crime (Hinkle & Weisburd, 2008). BWT suggests these increases in fear lead to a reduction in participation in community life and less 'eyes on the streets' (Jacobs, 1961) which results in increased crime and an increase in social and physical disorder as well. BWT thus suggest a vicious cycle where crime and disorder drive law-abiding citizens out of community life which results in steady increases in crime and disorder. Reducing crime, according to BWT, therefore requires addressing disorder and reducing fear of crime to encourage law-abiding citizens to participate in the community.

Social Disorganization Theory

Shaw and McKay (1969) are credited with the initial development of SDT (Williams & McShane, 2004). Using hand-drawn maps Shaw and McKay examine juvenile delinquency rates in a number of cities, most notably Chicago, over three decades on a square mile basis. Their research demonstrates the stability of crime problems within specific neighbourhoods over time. They also show that a number of other problems are correlated with juvenile delinquency rates, such as rates of infant mortality, rates of tuberculosis, and percentage of families on relief (Shaw & McKay, 1969).

Shaw and McKay (1969) build on these correlations using interview data to postulate a causal relationship where socio-economic challenges create conditions which eventually lead to juvenile delinquency. They argue that neighbourhoods with positive family dynamics and few challenges produce stable social relationships but in areas with socio-economic challenges family and community breakdown leads to social disorganization which fosters the conditions for juvenile delinquency. In these communities youths face conflicted moral value systems; at home, they typically learn the same values as those in wealthier neighbourhoods but in the community, the values encourage delinquency.

While social disorganization creates the preconditions for delinquent values to take hold, the diffusion of these values is argued to occur through Cultural Transmission Theory (Williams & McShane, 2004). According to Cultural Transmission Theory youth who are involved in delinquent behaviour initiate younger youth into this same behaviour; as these youths grow older they then initiate another group of younger youth into delinquency. In this way, neighbourhoods are unable to escape issues of delinquency, and crime, as they perpetuate from one time period to the next. Despite the ability of some individuals to overcome their community context, in the

aggregate Shaw and McKay (1969) show that youth are more likely to participate in delinquent behaviour if they are in an environment characterized by social disorganization where other youths are encouraging delinquency.

In the late 1990s, the Project on Human Development in Chicago Neighbourhoods re-examined the concepts from SDT. The study explored juvenile delinquency, adult crime, substance abuse and police reported crime rate data, in-person survey interviews with over 8,700 residents, 2,822 expert interviews, longitudinal studies following 6,000 randomly selected children and systematic social observations of 27,000 neighbourhood blocks (Earls & Visher, 1997). Using this data, Sampson et al. (1997) expand SDT to include the concept of collective efficacy, defined as "social cohesion among neighbors combined with their willingness to intervene on behalf of the common good" (918). Sampson et al., further refine the definition of collective efficacy stating:

> "Extending the concept of community cohesion, collective efficacy refers to mutual trust among neighbors combined with willingness to intervene on behalf of the common good, specifically to supervise children and maintain public order" (1998, p. 1).

Collective efficacy is, therefore, the mechanism by which social capital in a community is applied to address issues. When collective efficacy exists in a community it can help to mitigate concentrated disadvantage in neighbourhoods to reduce violence.

Routine Activity Theory

Cohen and Felson (1979), two more sociologists, developed RAT. They argue a crime requires three things: 1) a motivated offender 2) a suitable target and 3) the absence of capable guardians. Motivated offenders are individuals who are willing and interested in committing a crime. Suitable targets could be anything an individual wishes to steal or a person an offender wishes to harm. Finally, capable guardians are people or security measures which will prevent a crime

from being easily committed. When all three of these criteria are met Cohen and Felson (1979) argue the likelihood of a crime is high. RAT, therefore, explains how the combination of opportunity and location lead to crime.

RAT does not focus on the motivation for crime; the theory simply assumes some people will engage in crime if given the opportunity. Focusing on the criminal act influences the types of policy solutions generated from RAT. These solutions focus on making it more difficult to commit crimes through implementing better security systems or increasing lighting or increasing the number of police and other 'capable guardians' in a community (White et al., 2013). This theory does not lead to solutions focused upon making it less likely that an individual will become a criminal in the first place.

Opportunities for Geographers

SDT, BWT and RAT represent three frameworks for Geographers to use to better explain existing unanswered questions about the spatial distribution of crime. Much of the recent research conducted by geographers focuses upon SDT and RAT. This research tends to be quantitative in nature. Additional quantitative opportunities exist for geographers to continue to explore SDT and RAT. Opportunities also exist for qualitative studies and to examine BWT from a geography context.

Some promising opportunities to further study SDT and RAT can build upon the tools discussed earlier in this article. There is a need to validate many of the quantitative findings in these areas conducting in a North American, often United States context, in an international context to see if the findings are universal or North America specific (de Melo et al., 2015). Andresen's (2009) test and the ambient population can each be used to further explore the applicability of SDT and RAT. Indeed, the ambient population suggests that a number of past

findings may need to be revisited with a new denominator and the inappropriateness of aggregating crime types (Andresen & Linning, 2012) suggests a number of previous findings should be revisited altogether.

While SDT and RAT have been incorporated into a number of studies by geographers, BWT has yet to receive much attention from geographers. Attempt to incorporate BWT into a synthesized theoretical framework with RAT and SDT has therefore not yet been attempted. Work has been previously done to empirically test the relationship between RAT and SDT (Andresen, 2006a, 2006b; Andresen and Malleson, 2010; Ouimet), which can be built upon.

Research, by geographers, evaluates RAT compared to SDT. Some of this research finds RAT provided a better explanation of neighbourhood crime than SDT (Andresen, 2006a, 2006b; Andresen & Malleson, 2010). However, Ouimet's (2000) research found the Modifiable Areal Unit Problem (MAUP) can influence whether SDT or RAT is shown to be most effective at explaining crime. The MAUP occurs when the choice of boundaries for a research study influences the results of the study (Ratcliffe, 2010, 2002). In Ouimet's (2000) study he finds SDT is most effective at larger geographies and RAT is a better explanation in small areas.

Work to incorporate BWT with RAT and SDT could follow a similar model with attempts made to ascertain at what levels of geography BWT is effective at explaining neighbourhood crime when compared to RAT and SDT. It is possible this research will conclude that one or more elements from BWT, SDT or RAT are no longer supported by real-world data. Alternatively, it could be found that each theory helps to explain different elements about the causes and consequences of neighbourhood crime. Until this type of work is conducted it will not be clear how well the different theories operate and how they fit together.

BWT also has a number of theoretical research opportunities arising from the theory's detractors worthy of exploration by geographers. Jackson (2004) suggests a flaw in BWT, arguing that most people are not actually afraid of crime, instead, they only express concerns when asked survey questions about it. Even if there actually is disorder in the area, they may respond indicating they are afraid of crime, but actually, mean they are simply aware the neighbourhood has high crime. This challenges the logic of BWT as individuals may not actually react to disorder with fear. So perhaps it is possible that disorder is not a cause of crime but simply correlated with it.

Gau and Pratt (2008) also question BWT, arguing that it is a tautological argument. The causal relationship from disorder to fear of crime is central to BWT. However, Gau and Pratt (2008) apply confirmatory factor analysis techniques to survey data from Washington State to demonstrate that individuals do not conceptually interpret questions about fear of crime and questions about disorder as distinct. Instead, an individual asked about fear of crime or about disorder hears essentially the same question and responds accordingly. BWT relies upon individuals perceiving disorder and then becoming fearful; if individuals have conflated the ideas of disorder and fear of crime into one concept BWT is a tautological theory.

The questions raised by Gau and Pratt (2008) and Jackson (2004) suggest opportunities for geographers. Temporal geographic techniques could help to clarify the nature of the relationship between crime and disorder. Geographers can solve these debates by exploring the question: how does a space change after the introduction of disorder?

While challenges against BWT's academic consistency exist, the main criticisms of the theory focus upon its application. James Q. Wilson acted as a consultant for the New York City Transit Authority where William Bratton implemented his ideas. In 1994 after the election of

Rudy Giuliani as Mayor, Bratton was appointed as Commissioner of the New York City Police Department. With the support of the Mayor, Bratton proceeded to implement Wilson's approach to BWT to attempt to reduce crime. New York City police focused aggressively on quality of life issues related to physical and social disorder, an approach which was called "order maintenance policing". These tactics resulted in increased arrests for misdemeanour offences (Malcolm, 2000) and a corresponding drop in crime (Waller, 2006). Broken Window Theory proponents saw this as evidence of the usefulness of the theory in preventing crime. However, other research called this into question as the crime rate began to drop in New York City before Bratton's appointment as Commissioner (Waller, 2006) and the decline in crime roughly mirrored that of other major cities (Levitt, 2004). Most damaging to the theory is evidence that the drop in crime is better explained by other factors, such as the diminishing crack epidemic, legalized abortion, increased prison populations and increases in police numbers (Levitt, 2004).

Despite the strong evidence against order maintenance policing's effectiveness in New York City, BWT application in practice still warrants further examination. Many North American police departments continue to apply principles of BWT to their everyday operations, yet related applied research has not kept pace. Despite the theory's failure to explain the New York City crime decline, it is possible the application of BWT has led to crime reductions in other jurisdictions. Scholarship focused upon on the impact of order maintenance policing on crimes rates is worthy of additional attention. Returning to the criticisms of Sharpe (2000), community attitudes towards order maintenance policing itself also warrant's study.

The approach of feminist and critical geographers would also be particularly relevant to reviews of order maintenance policing. Examining the application of order maintenance policing will likely reveal stigmatization of racial groups. Feminist geographers may also wish to examine

the spatial aspects of survivorship (Willis et al., 2015) and how these are addressed, or not, by order maintenance policing.

A wider examination of different interventions modelled after BWT is also an avenue for potential research. BWT suggests that cleaning up disorder should reduce crime; despite a general focus on police to perform these interventions, social service agencies are often better positioned to directly address social disorder (Piscitelli & Perrella, 2013). Indeed much of the work of social service agencies directly relates to disorder, yet few studies have examined the impact of social services on BWT. In most cities, by-law officials are directly responsible for many elements of physical disorder, such as graffiti or littering. Again few studies have examined the impact of by-law enforcement officers on BWT. The outcomes of research in these areas could lead directly to practical suggestions on how to reduce disorder in a manner which reduces crime and victimization.

BWT focuses on the interactions between the physical and social environments. The concept of physical disorder relates directly to the physical environment while social disorder relates to human behaviour, participation in community life and crime. Perceptions of neighbourhood disorder are social constructed and dependent on individual characteristics, such as gender, length of residency, being a parent (2010). In other words, BWT is interested in understanding place at the neighbourhood level. In geography, place is of course more than just a specific area it also refers to the cultural practices of the location (Gieseking, Mangold, Katz, Low, & Saegert, 2014). A qualitative study focused on the concept of place to explore how people form perceptions of disorder (Hinkle and Yang, 2014) could help to expand our understanding of BWT. Such a study could build on the work of Hinkle and Yang (2014) who

use quantitative techniques to suggest that people use physical disorder to determine levels of social disorder.

SDT, like BWT, has potential policy implications but it too faces theoretical questions. St. Jean (2007), a sociologist, argues SDT and BWT both fail to account for how location influences criminals selection of targets:

> "Both broken windows theory and collective efficacy theory focus on the *reactive* rather than the *proactive* aspects associated with offending. They portray offenders as reacting to neighborhood conditions – whether such conditions are signs of neighborhood disorder in the physical and social environment, or levels of collective efficacy, capacities for collective action among the opposing law-abiding population" (St. Jean, 2007, p. 32).

While St. Jean acknowledges that disorder, collective efficacy and socio-economic conditions may correlate with the concentrated of crime in certain areas, it is the advantages offered by different locations which explain why crime occurs in those spots, not other locations. For example, St. Jean found that when drug dealers are deciding on locations to sell they are primarily focused on finding areas with high demand, close access to a supply of bulk drugs, access to unemployed youths for cheap labour and crowded locations with high opportunities for sales. They also seek a location where they can have a non-criminal excuse for being in the area. None of these factors directly relate to disorder, collective efficacy or socio-economic conditions. While St. Jean does not use the phrase 'space-place-environment nexus', his book is arguing for more attention to the interconnection between these concepts when trying to explain neighbourhood crime. This is clearly an area that is ripe for further exploration by geographers.

SDT could also benefit from research examining the impact of formal social control mechanisms (Kubrin & Weitzer, 2003). Currently, much of the research on SDT focuses on informal social control. Research examining formal control could be conducted by incorporating

police patrol patterns, the presence of youth recreation centres, and other formal control mechanisms as variables in regression models testing neighbourhood levels of crime.

Conclusion

Geographers have the potential to make valuable contributions to the further understanding of the spatial distribution of crime. BWT, SDT, and RAT each face theoretical questions and challenges warranting the attention of geographers. Criminologists have been addressing these questions for years but could greatly benefit from insights of geographers. The examples of new techniques and approaches to addressing the spatial distribution of crime cited earlier show the valuable contributions geographers can make to criminology. Future collaborations between criminologists and geographers can assist in having these techniques become widely adopted in the geography and criminology literature.

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Chapter #2: Connecting social disorganization to broken windows and routine activities

By Anthony Piscitelli and Sean Doherty

Abstract

Routine Activity Theory, Broken Windows Theory, and Social Disorganization Theory each attempt to explain the spatial distribution of neighbourhood crime. This paper explores how these theories relate to neighbourhood crime. A concept map integrating key concepts from the theories comprehensively describes the causes of neighbourhood crime. In particular, the map highlights the concept of Ecological (Dis)advantage as a key link between Routine Activity Theory and Social Disorganization Theory. Combining these theories explains more about the causes of neighbourhood crime than any one individual theory acting alone.

Introduction

In the 1800s, Guerry (2002) and Quetelet (1984) were the first to use an ecological approach to examine the spatial distribution of crime (Kindynis 2014). Ecological approaches focus on explaining the concentration of crime and deviance within specific geographies or as a function of the surrounding environment (Stark 1987). Routine Activity Theory (RAT), Broken Windows Theory (BWT), and Social Disorganization Theory (SDT) primarily operate in an ecological tradition. Each of these theories emphasizes scientific approaches to understanding the spatial distribution of crime. Studies verifying and testing these theories typically use quantitative methods and/or structured qualitative approaches. The integration of these different theoretical perspectives can aid in better explaining the spatial distribution of crime, thus continuing to build on the 18 decades of research into the geography of crime.

Social Disorganization Theory

Shaw and McKay (1942, 1969) are credited with founding SDT. Concentric Zone Theory, developed by Park et al. (1925), serves as a central component of this theory. The expansion of cities, according to Park et al. (1925), initially leads new residents to the core of a city due to their financial limitations. Then, as families become more affluent they continually try to move further from this city core. Park et al. (1925) suggested that one of the negative impacts of migration and immigration on cities is the concept of disorganization. Shaw and McKay (1942, 1969) expanded on this basic concept to develop an explanation of social disorganization which would form the foundation of SDT.

Shaw and McKay (1942, 1969) first explored the causes of social disorganization by creating hand-drawn maps of juvenile delinquency rates for Chicago and other North American cities. These maps demonstrated where juvenile delinquency was concentrated. Typically, they found rates were higher near the core of cities and in other neighbourhoods marked by socioeconomic challenges. They explain that these challenges lead to community breakdown and make it more difficult for families to instil traditional values within their children. Social disorganization creates community breakdown and causes higher rates of juvenile delinquency.

Cultural Transmission Theory further explains how family difficulty with instilling traditional values fosters delinquent values and "unconventional behaviour" in neighbourhoods (Shaw and McKay 1942, 1969). Shaw and McKay (1942, 1969) demonstrate, using case studies, that boys learn delinquent and socially deviant values from other older boys. As these boys grow older, they pass along these same values to other younger children.

While the work of Shaw and McKay (1942, 1969) was influential on a number of scholars, over time SDT declined in prominence. In the 1990s, it experienced a revival as a result

of the Project on Human Development in Chicago Neighbourhoods (PHDCN). This research project gathered data on juvenile delinquency, adult crime, and substance abuse in Chicago. This information was complemented through surveys of over 8,700 residents, 2,822 expert interviews, longitudinal studies following 6,000 children, and systematic social observations of 27,000 blocks (Earls and Visher 1997). The research study allowed for the empirical testing and verification of many of the concepts introduced by Shaw and McKay. Research since the 1990s has demonstrated the impact of neighbourhood income, levels of ethnic heterogeneity, and length of neighbourhood residence on the ability of neighbourhoods to maintain effective social control (Kubrin and Weitzer 2003; Hipp 2007; St. Jean 2007).

In the 1980s, SDT was criticized for a lack of empirical measurement of neighbourhood attitudes. Instead, empirical research based on the theory focused on socio-economic factors within a neighbourhood and assumed the connection to values (Bursik 1988). The survey work of the PHDCN directly addressed these concerns by allowing exploration of the underdeveloped idea that "dominant values become existentially irrelevant in certain community contexts" (Sampson and Wilson 1995, 51). In exploring these issues, researchers were also able to add the concept of collective efficacy to SDT.

Sampson et al. (1997, 1998) suggested the inclusion of collective efficacy as an important addition to SDT. They defined collective efficacy with a focus on mutual trust: "[C]ollective efficacy refers to mutual trust among neighbours combined with willingness to intervene on behalf of the common good, specifically to supervise children and maintain public order" (Sampson et al. 1998, 1). The concept of collective efficacy helps to explain variations in local crime rates which deviate from what is expected based on socio-economic conditions (Browning 2002; Sampson et al. 1997, 1998; Sampson and Raudenbush 1999, 2001, 2004;).

SDT has been criticized on a number of grounds. For example, the theory does not adequately explain the impact of formal social control mechanisms (Kubrin and Weitzer 2003), its empirical analysis places an overemphasis on official records (Bursik 1988), and it does a poor job of explaining crime at specific spaces within neighbourhoods (Andresen and Malleson 2010).

Routine Activity Theory

RAT, developed by Cohen and Felson (1979), argues three things are required for a crime to take place: a motivated offender, a suitable target, and the absence of capable guardians. Cohen and Felson (1979, 590) defined a motivated offender as someone "with both criminal inclinations and the ability to carry out those inclinations." A suitable target is an object with value, physical visibility, accessible to the offender, and does not present challenges due to limitations such as its size, weight, or it being locked (Cohen and Felson 1979). Finally, the absence of capable guardians refers to the lack of individuals who can prevent criminal violations.

Some theoretical work has been done to examine the connections between SDT and RAT (Ouimet 2000; Andresen 2006; Hipp 2007; Roth et al. 2013). These studies primarily focus on testing which approach is better at explaining crime. Andresen (2006), for example, used regression analysis to examine variables associated with RAT and SDT. He concluded that RAT does a better job of explaining crime rates. In contrast, Ouimet (2000) argued that the level of geographic aggregation impacts which theory is a better predictor of crime. When a census tract is used, as was the case in Andresen's study, RAT provides the superior explanation. However, if an amalgamation of census tracts is used, SDT provides the better explanation.

Hipp (2007) significantly advanced the integration of RAT and SDT by highlighting an interesting dilemma. High-income areas are likely to present more attractive targets for crime, as suggested by RAT, but aggregate conditions in these areas are likely to face less clustered

economic disadvantage, which SDT suggests will cause less crime. Indeed, Hipp found evidence in support of both theories' claims.

RAT has been used to develop other theoretical approaches with practical applications. For example, Pattern Theory builds on RAT to explain that offenders find suitable targets in close proximity to their daily travel paths (Reid et al. 2014). The practical elements of this contribution are important. If offenders do not deviate significantly from their daily routine to commit crimes, eliminating opportunities for a crime will not promote displacement of crime to other locations. Situational Crime Prevention relies on this finding to reduce opportunities for crime and thus eliminate crime (Clarke 2012). Opportunities to commit crime are a direct cause of crime (Clarke 2012), therefore providing mechanisms to eliminate targets or to provide suitable guardians can eliminate crimes and not just displace them to other locations interventions (Cornish and Clarke 1987; Clarke 2012). For example, taking away the keys from a drunk driver will not lead them to commit another crime but instead will cause them to take a cab or the bus home (Cornish and Clarke 1987).

RAT has also been combined with a rational choice perspective to develop strategic methods for practitioners to use to prevent crime: increase the effort needed to commit a crime, increase the risk of getting caught, reduce the value of the reward for committing a crime, reduce the immediate triggers that cause a crime, and reduce excuses that can lead to someone committing a crime (Cornish and Clarke 1987; Brantingham et al. 2005). Indeed, these methods have led to the creation of the Centre for Problem-Oriented Policing to evaluate and share these types of approaches (Brantingham et al. 2005; Clarke 2012).

In addition to its practical applications, RAT is widely accepted as a useful framework for offering theoretical explanations about why crime occurs in a specific location. RAT builds

on Jacobs's (1961, 35) concept of "eyes on the street." Jacobs argues that having many people interacting within a neighbourhood is essential to creating a vibrant and safe community. RAT extends this concept to suggest the absence of law-abiding citizens in an area can become a cause for increases in crime. Cohen and Felson (1979, 589) explicitly argue that "the convergence in time and space of suitable targets and the absence of capable guardians may even lead to large increases in crime rates without necessarily requiring any increase in the structural conditions that motivate individuals to engage in crime." Three years later, this emphasis on capable guardians would become a key component of BWT.

Broken Windows Theory

In 1982, Wilson and Kelling introduced BWT, arguing that an unrepaired window in a building leads to other windows being broken. Similarly, in a community, neighbourhood problems that are not quickly attended to lead to more neighbourhood problems. According to BWT, neighbourhood problems manifest as social disorder and physical disorder. Social disorder occurs when individuals' "untended behaviour …leads to the breakdown of community controls" (Wilson and Kelling 1982, 31) by creating feelings of insecurity amongst community residents. Individuals creating these feelings include "panhandlers, drunks, addicts, rowdy teenagers, prostitutes, loiterers, the mentally disturbed" (Wilson and Kelling 1982, 29). While social disorder requires the presence of people behaving in a manner that makes others feel uncomfortable, physical disorder comprises changes in the urban landscape either as a direct result of individual actions or arising from neglect of property. Physical disorder typically includes graffiti, litter, overgrown lawns, or unrepaired damage to property (such as broken windows). According to BWT, disorder in a community signals to potential offenders that they can commit crimes in this area without being caught. Disorder is, therefore, a visual cue for

motivated offenders showing them which areas of a community are potential worthwhile targets (Wilson and Kelling 1982). BWT also suggests that increases in social and physical disorder in a community lead to increases in fear of crime (Hinkle and Weisburd 2008), resulting in law-abiding citizens withdrawing from participation in their neighbourhoods. In essence, there is a negative feedback loop: disorder leads to fear of crime which also leads to more disorder.

BWT provides a useful mechanism for explaining crime at specific locations while also providing context for understanding the contribution of place. According to BWT, crime should be higher in places with physical disorder and/or social disorder. In addition, the presence of disorder in these places influences neighbourhood conditions, thus making it more likely for other areas in the neighbourhood to develop disorder and crime issues.

Despite the logical consistency of BWT, the approach has been questioned. Field experiments have called into question the connection between disorder and crime purported by BWT. For instance, Sampson and Raudenbush (1999) used systematic social observations to determine the amount of disorder in Chicago neighbourhood blocks. Block-level videotape recordings of the number of incidents of physical disorder and social disorder were made. Incidents of disorder were then individually counted and compared to crime rates. Whilst BWT would predict a strong positive correlation between the two, Sampson and Raudenbush (1999) only found a modest correlation, suggesting that collective efficacy (as later explained) is a better predictor of crime.

Questions have also arisen as to individual's ability to distinguish between disorder and fear of crime when asked about them in surveys. Jackson (2004) suggests that in neighbourhoods with high levels of disorder, people may not actually be afraid of crime. However, individuals asked about fear of crime may indicate high levels of fear as a means of expressing concern

about crime in the community. Some survey respondents, therefore, may affirm a fear of crime as a means to indicate an awareness of the disorder in the community.

The biggest criticisms of BWT focus on the practical application of the theory to attempt to prevent crime. BWT has been used to justify Order Maintenance Policing (OMP) strategies as a means to reduce disorder and thus reduce crime. Under an OMP approach, officers focus on social disorder and other minor infractions (Gladwell 2000). This approach was used to explain a decline in crime in New York City, but the decreased use of crack cocaine and increased policing numbers proved to better explain the reduction in New York's crime rates (Levitt 2004).

Past attempts at theory integration

The integration of BWT with RAT or with SDT has not been substantively explored within the academic literature. This hesitation to integrate BWT may be partially due to questions many scholars hold about the theory's application. For instance, when BWT was put into practice under an Order Maintenance Policing strategy, it was shown to be ineffective (Levitt 2004; Waller 2006). However, this failed application does not necessarily invalidate the theory; instead, it simply calls into question one specific policing approach.

St. Jean (2007) has made perhaps the most extensive attempt to integrate BWT and SDT, though focussed primarily on pointing out theoretical shortcomings of both approaches and suggesting a better alternative. In exploring BWT, St. Jean (2007) raised questions about the link between offenders' perceptions of disorder and their selection of targets. For example, in interviews with drug dealers, clients of drug dealers, police officers, and community residents, St. Jean determined that disorder is not a significant predictor of the locations dealers choose. Instead, dealers looked for locations that offered high demand, close proximity to a supply of bulk drugs, access to unemployed youth to act as salespeople, and easy opportunity for escape—

as well as being locations that offered dealers legitimate reasons for being in the area. St. Jean suggests that these location selection reasons are better explained by a concept called Ecological (Dis)advantage.

St. Jean's work suggests that Ecological (Dis)advantage can extend BWT and SDT. According to St. Jean (2007), BWT and SDT fail to account for the advantages spaces offer an offender and the influence spaces have on motivated offenders. The concept of Ecological (Dis)advantage is used to define how offenders look for locations exhibiting specific characteristics, which make it easier to commit a crime and evade detection.

In contrast, SDT places collective efficacy as a central cause of community crime. St. Jean (2007) suggests that collective efficacy is less important in explaining community crime than the circumstances occurring at a given time in specific spaces within neighbourhoods. Offenders of crimes react to the conditions of particular locations within an area to determine where they will commit crimes. Therefore, two different areas with similar levels of collective efficacy, but variations in conditions which create opportunities for crime, will have different levels of crime. Areas with high collective efficacy will have low crime, but low collective efficacy alone is not sufficient to cause high crime.

According to St. Jean, BWT similarly fails to fully explain neighbourhood crime. Areas with low levels of social disorder will have low crime, but high social disorder alone will not lead directly to crime (St. Jean 2007). These issues raise the question: what else is needed besides low collective efficacy and high social disorder to lead to crime? St. Jean (2007, 3-4) suggests Ecological (Dis)advantage as the missing variable:

> Using the concept of *ecological disadvantage*, I offer extensions of broken windows and collective efficacy theories. *Ecological disadvantage* posits that (a) urban space is unevenly developed, and (b) different crimes are habitually committed in particular locations that offer offenders specific advantages. Therefore, (c) the influence that factors such as neighbourhood disorder and collective efficacy may have on the formation of crime hot spots cannot be adequately understood without first considering the spatial positioning of the location independently places it at a disadvantage for certain criminal opportunities. (italics in original)

Consequently, by focusing on specific spaces and their connection to offenders, St. Jean provides an important link between SDT, BTW, and RAT which can aid in the development of a conceptual framework to connect these different theoretical approaches.

Integrated conceptual framework of the spatial distribution of neighbourhood crime

The concept map (Figure #2) proposes how SDT, BWT, and RAT can be integrated into an attempt to better explain the spatial distribution of crime within and between neighbourhoods. Concept maps use cross-links to show the connections between different concepts (Novak and Cañas 2008), in this case, those related to BWT, SDT, and RAT.

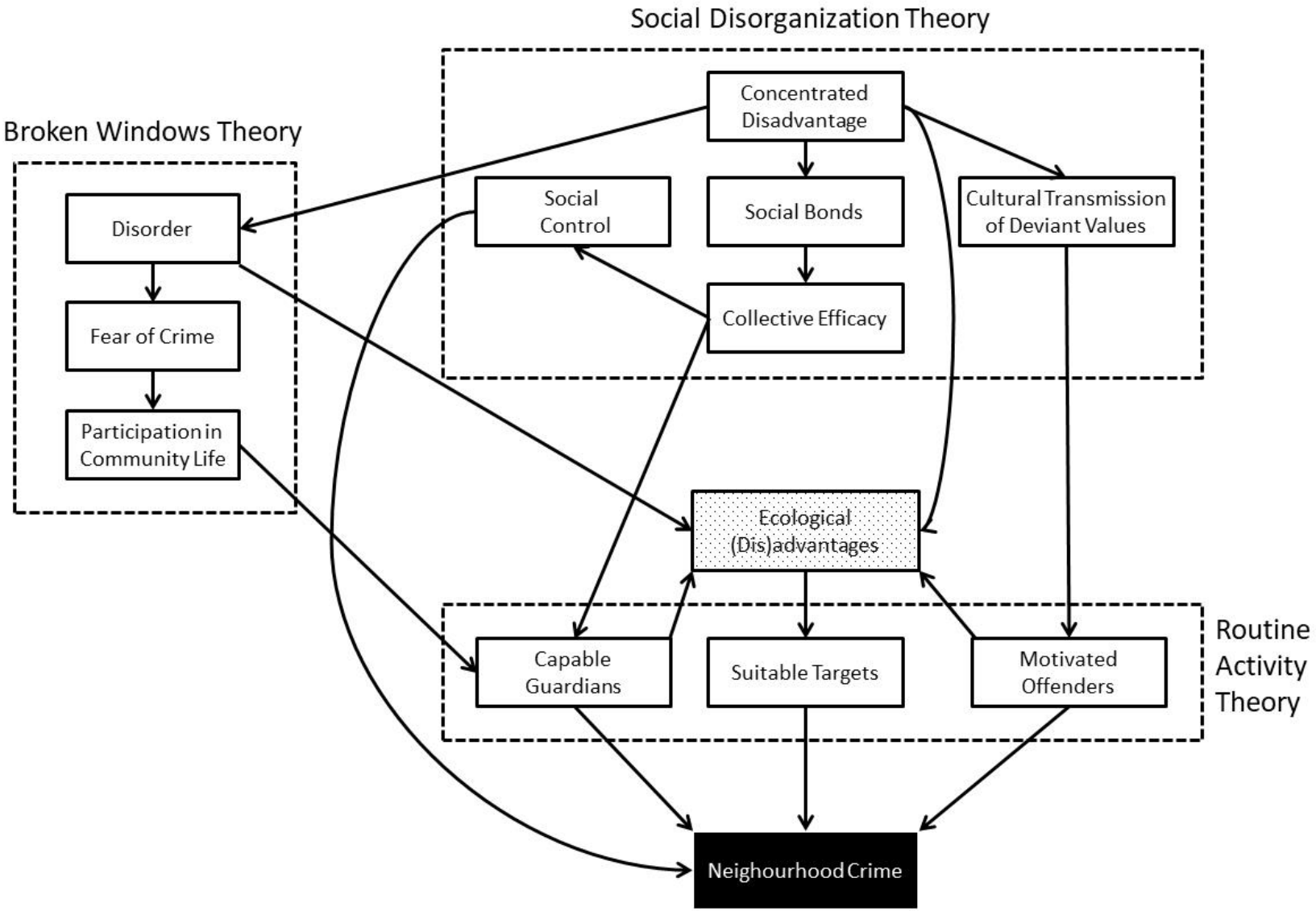

Figure #2: Concept map for theories on the spatial distribution of crime

The key concepts of RAT retained in the concept map are motivated offenders, suitable targets, and capable guardians. Each of these links directly to neighbourhood crime as causal factors. Suitable targets are a necessary, but not sufficient, condition for crime. The presence of motivated offenders and the absence of capable guardians increases rates of crime. Motivated offenders also find suitable targets by looking for Ecological (Dis)advantages as explained by St. Jean (2007).

SDT's key concepts are concentrated disadvantage, cultural transmission of deviant values, social bonds, social control, and collective efficacy. Concentrated disadvantages are socio-economic challenges in an area which reduce social bonds and increase the cultural transmission of deviant values, while also making it more difficult for the cultural transmission of conventional values. These values then create overall neighbourhood values while reinforcing the cultural transmission of deviant values. The adoption of deviant values also leads to motivated offenders, as discussed by RAT.

Concentrated disadvantage also directly increases the Ecological (Dis)advantage of spaces. Ecological (Dis)advantage then becomes a key link to RAT as it provides an increase in opportunities for suitable targets. Within SDT, the concept of social bonds is required for the creation of collective efficacy. This means that residents have a willingness to intervene in issues within their neighbourhood. Collective efficacy, by increasing the willingness to intervene, therefore helps to create capable guardians and thus provides an additional link between SDT and RAT. Collective efficacy also leads to increases in social control in an area (Browning 2002), which subsequently reduces neighbourhood crime.

Within the concept map, BWT includes the concepts of disorder, fear of crime, and participation in community life. Disorder encompasses both physical and social disorder. Its

presence leads to fear of crime in a neighbourhood and influences offenders' perception of opportunities for crime as defined by the concept of Ecological (Dis)advantage. Fear of crime, in turn, reduces participation in community life by law-abiding citizens by making citizens afraid of becoming a victim of crime (St. Jean 2007). This leads to a lack of capable guardians on the streets, thus providing a direct link between BWT and RAT. Capable guardians, as previously noted, increase social control which reduces neighbourhood crime.

The integration of SDT, RAT, BWT, and Ecological (Dis)advantage into a single concept map provides a useful framework to better understand the spatial distribution of crime. In this framework, SDT concepts are best measured at a neighbourhood or community level as they are focused on the cultural context. The key linkages for SDT are through Ecological (Dis)advantage and motivated offenders. Concentrated disadvantage links to Ecological (Dis)advantage. Ecological (Dis)advantage proposes that offenders choose targets based on the specific advantages that locations provide—thus locations provide an advantage for offenders, a disadvantage for the community. This makes it easier to commit a crime and less likely for offenders to get caught. These advantages are not found in broad community conditions but instead, focus on a location's specific advantages.

Motivated offenders are the second key linkage between SDT and RAT. SDT postulates that neighbourhoods culturally transmit deviant values. Concentrated disadvantage makes it more difficult for families to reinforce traditional values amongst their children, while also creating opportunities for individuals to find material success through crime. The success of individuals who break the law shapes neighbourhood values that stand in contrast to traditional values. Children then learn these deviant values from adults and older youth creating a vicious cycle, which increases the number of individuals willing and motivated to commit crimes. How

these motivated offenders choose their targets is in turn explained by the concept of Ecological (Dis)advantage and RAT.

Finally, BWT helps to explain the spatial distribution of crime. Disorder creates fear of crime amongst individuals. This shapes the sense of place by creating aggregate feelings of fear within a neighbourhood and highlighting, for offenders, areas with Ecological (Dis)advantages. Participation in community life is subsequently influenced by fear; reduction in participation in the aggregate reduces the availability of capable guardians. This provides a link between BWT and RAT. However, a key distinction is present in that link. BWT is concerned with the aggregate process that reduces the presence of capable guardians within a neighbourhood as a whole. It is also concerned with how these processes influence community crime rates. RAT focuses on how capable guardians can influence the likelihood of crime in a specific location.

Conclusion

SDT, RAT, BWT, and the concept of Ecological (Dis)advantage can be integrated into a comprehensive concept map explaining why crime occurs in neighbourhoods. This concept map also shows how addressing the specific root causes of crime may impact neighbourhood crime. Future research is needed to validate this integration. An empirical testing of the entire concept map could be accomplished by combining police reported crime data, systematic social observations of disorder and suitable targets, and a large-scale community survey of attitudes, behaviours, and perceptions. Engaging former offenders to assist in the systematic social observations could aid the accurate assessment of areas with the presence of suitable targets and absence of capable guardians.

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Chapter #3: Spatial Regression of Juvenile Delinquency: Revisiting Shaw and McKay

By Anthony Piscitelli

Abstract

This paper re-examines the seminal work of Shaw and McKay (1942, 1969) on the spatial analysis of crime using modern statistical regression techniques as a test of Social Disorganization Theory. Data from the hand-drawn maps in the book Juvenile Delinquency in Urban Areas were transcribed and analyzed using four spatial lag and four spatial error regression models. The spatial regression analysis shows families on relief, median monthly rent, homeownership rates, and rates of foreign-born and minority heads of households each have a statistically significant impact on male juvenile crime and delinquency. Distance from the central business district is not significant in any of the models presented. This analysis validates Shaw and McKay's core findings demonstrating why SDT has become and still is, an important theoretical perspective explaining neighbourhood crime.

Introduction

In *Juvenile Delinquency and Urban Areas* Shaw and McKay (1942, 1969) introduce the central concepts of Social Disorganization Theory (SDT). When originally introduced their work challenged the positivist's views which emphasized crime as caused by individual factors (Williams & McShane, 2004). Over time this approach has grown and now represents a dominant theoretical perspective which helps to explain the root causes of crime in communities (Williams & McShane, 2004).

Andre Guerry (1833) and Adolphe Quetelet (1842) began the 'Cartographic School' (Kindynis, 2014) which was prevalent in the mid and late 1800s. Their research demonstrated

that crime in France varied by season (Ceccato, 2015) and geography (Shaw & McKay, 1942, 1969). They did this by creating maps to show the relationships between crime, poverty and education (Bernasco & Elffers, 2010; Ratcliffe, 2010).

In 1925, borrowing from Cartographic School techniques, Ernest Burgess developed the 'concentric zone' model (Kindynis, 2014) which proposed that cities had a central business district (CBD) found at a city's core, surrounded by a series of concentric circles of varying land-uses. In the CBD's, crime and social problems were at the highest rate. Burgess hypothesized that by moving away from the CBD, from one circle to the next, social problems within a city declined. According to Burgess, people reacted to these social problems by constantly trying to improve their living conditions by moving further from the city core.

Park et al. (1925) built upon Burgess ideas in *The City*. They identified five specific zones in cities, each two miles wide: the central business district, the 'zone in transition', (which consisted primarily of run-down housing), the working-class zone, the middle-class housing zone and the affluent suburbs. With the publication of *The City* Park is credited with starting the Ecological School of Crime, also known as the Chicago School (McLaughlin & Muncie, 2012).

The Ecological approach focuses on explaining why crime is concentrated in some neighbourhoods but not in others (Stark, 1987). The emphasis, within the ecological school, on crime by area distinguished the approach from Biological Positivists operating in the early 1900s. The Biological Positivists approach to explaining crime focused upon heredity and other biological factors arguing that individuals were born with a propensity to commit a crime (White, Haines, & Eisler, 2013; Williams & McShane, 2004). In contrast, Ecological approaches focused on the impact of the conditions at geographic locations on crime.

In the *Juvenile Delinquency in Urban Areas* and the revised second edition, Shaw and McKay (1942, 1969) took an Ecological approach to explain crime. Though this study does not expressly use the phrase "Social Disorganization Theory", it is widely regarded as a seminal work on the subject (Andresen, 2006; McLaughlin & Muncie, 2012; Sampson & Wilson, 1995). The book demonstrates the theory by examining juvenile delinquency in a number of American cities. In early chapters of the revised edition Shaw and McKay discuss the city of Chicago over three time periods, 1900 to 1906, 1917 to 1923, and 1927 to 1933. The middle chapters explore juvenile crime in the cities of Philadelphia, Boston, Cleveland, Cincinnati, and Richmond. Finally, the book concludes by returning to Chicago and the surrounding suburbs reviewing delinquency issues from 1934 to 1966. The revised edition cuts sections found in the original edition on Columbus, Birmingham, Denver, Little Rock, Seattle, Portland, Oregon, Spokane, Tacoma, Evansville, Peoria, Omaha, Baltimore, Minneapolis and St. Paul, and Vancouver, British Columbia.

In their examination of Chicago from 1900 to 1933 Shaw and McKay focus on male juvenile delinquents. Building on the work of Park, Burgess, and McKenzie they find that delinquency tends to be concentrated near the central business district in the city centre or near outlying industrial areas. Shaw and McKay expand on these observations and note a number of other factors in Chicago which on a square mile basis correlate with juvenile delinquency. Positively correlating variables included infant mortality rates, tuberculosis rates, truancy rates, rates of mental health issues, the percentage of families on relief, the percentage of immigrant and minority heads of families, juvenile recidivism rates, juvenile court appearances, and juvenile commitments. Median rental cost negatively correlated with juvenile delinquency. In addition, Shaw and McKay found that delinquent areas are stable over time. They note

specifically that the 12 square mile areas with the highest rates of delinquency from 1900 to 1906 are the same from 1927 to 1933. In explaining this stability Shaw and McKay make a major theoretical contribution to the literature.

Shaw and McKay (1969) introduce, what is currently called, Cultural Transmission Theory (Williams & McShane, 2004) to explain the stability in delinquency rates over time.

> [C]ontact [between youth delinquents and adult offenders] means that the traditions of delinquency can be and are transmitted down through successive generations of boys, in much the same way that language and other social forms are transmitted (p. 174).

Shaw and McKay (1969) demonstrate that in areas with "low economic status" (p. 171) moral values take hold "in direct opposition to conventionality as symbolized by the family, the church, and other institutions common to our general society". Enough successful gangs and other adult criminals possessed these contrary values that they compete with the "conventional" moral values of society. Parents, the church and other institutions are still able to instil conventional values in some individuals, but many youths also learn "unconventional behavior" (p. 175) which leads to the proliferation of crime in the neighbourhood.

A series of case studies of youth demonstrates the transmission of deviant values. In these cases, one generation of delinquent youths encourages the next to adopt delinquent values. This next generation then introduces delinquency to the subsequent generation, creating a vicious cycle. For example, one interviewee describes his induction into a gang.

> One day when I was about nine, we were caught by the gang that beat me up my first day home from the orphanage. They wanted us to join their gang I saw we would get the worst of it, so I made a bargain with them. I told them to let James (my brother) alone, and if they did, I would join their gang. They wanted us both and I pleaded and begged. Finally, the leaders, the fellow that gave me the beating, agreed…The gang was about thirty strong. They would steal milk off porches, bread from bread boxes, steal from peddlers and take kids' lunch money from them. At first I just watched them (Shaw and McKay, 1969, p. 178).

The interviewee then describes his first crime. “When my turn came I wanted to back down. I was shaking like a leaf. They threatened to jump me so I took the hammer and busted a machine with gum balls” (p. 178) [Italics in original]. Once initiated the boy becomes further involved in the gang and he begins to make a lot of money. This makes his younger brother want to join as well. Eventually, the interviewee becomes the leader of the gang. He adds his brother to the gang and teaches him how to steal pursues. Thus despite the interviewee's initial efforts to protect his brother from becoming a member of the gang he ultimately becomes directly responsible for his joining. This completes a full cycle of the transmission of deviant values with the interviewee accepting the values himself and then transmitting them to his brother.

Shaw and McKay, in a section titled “Differential Social Organization” (p. 183), elaborate on a number of methods for the transmission of deviant values in lower status economic areas. First, the family’s attempts to instil conventional values are neutralized because one family member is often making money from illegal activities (as was demonstrated in the previous case study). Second, youth typically identify more with their peers than their parents. Third, Shaw and McKay describe this as a new problem which does not yet have a solution. The issue is a result of the increase in leisure time youth have in cities. This was not typically a problem in the ‘Old World’ or in rural farming communities where children are busy with chores. The solution to harsh punishment, which some parents have tried, often only reinforces peer connections, thus further undermining conventional values. Finally, Shaw and McKay noted that the solution of outside agencies trying to ‘fix’ the problem is also failing.

> If the school or playground adapts its program in any way to local needs and interests, with support of the local sentiment, it becomes a functioning part of the community; but instead, it is often relatively isolated from the people of the area, if not in conflict with them. (Shaw & McKay, 1969, p. 186).

Since these programs designed to support the local community tend not to be adapted to local needs they are ineffective at combating the spread of deviant values from one generation to the next.

Shaw and McKay do not use the words "Social Disorganization" in their original edition of *Juvenile Delinquency and Urban Areas* and in the revised edition the only mention it once.

> It is likely that the forces which lead to a segregation of the groups with lowest economic status in deteriorated areas are related to the forces which make for **social disorganization** and a breakdown of community controls within these areas (Shaw & McKay, 1969, p. 290). [Emphasis added]

The only other references to SDT worth noting, as was previously mentioned, occurs when Shaw and McKay use "Differential Social Organization" as a section title in both the first and revised editions and in the introduction to the revised edition where Short uses the words 'Social Disorganization'. Despite not initially naming their theoretical approach, their work had a widespread impact (White et al., 2013; Williams & McShane, 2004). SDT helped to inspire future criminological theories such as Social Control Theory and Differential Association Theories (Williams & McShane, 2004). In addition, many scholars have used SDT as the framework for their own studies.

The breadth of research influenced by Shaw and McKay is widespread and has lasted decades (White et al., 2013). In the past five years, researchers using the SDT have tested the theories ability to explain a wide variety of youth and adult crimes. For example, Law and Quick (2013) show SDT has applicability for explaining the location of young offenders in Toronto. Grubesic (2010) demonstrates SDT can help explain the location of sex offender clusters. LaRue and Andresen (2015) use SDT as a framework for examining rates of burglary, robbery and

motor vehicle theft. Benson et al (2003) find SDT can even be used as the basis for explaining intimate partner violence occurring primarily within the home environment despite the theory's emphasis on the neighbourhood.

Much of this recent interest in SDT can be traced to the Project on Human Development on Chicago Neighbourhood (PHDCN). The PHDCN examined the impact neighbourhoods have on childhood development. The research focused on juvenile delinquency, adult crime, substance abuse and violence. The approach responded directly to criticisms of the lack of research directly measuring social disorganization (Bursik, 1988). The PHDCN overcame the issues surrounding the direct measurement of social disorganization through a study design which included in-person survey interviews with over 8,700 residents, 2,822 expert interviews and 27,000 block by block observations of disorder (Earls & Visher, 1997). The research subsequently resulted in numerous publications that expanded SDT and the understanding of crime and victimization at the neighbourhood level. For example, Sampson and Raudenbush (2001) confirm elements of SDT finding it is "neighbourhood cohesion and informal social control…that most affect crime" (p. 4). The most notable contribution to SDT as a result of the PHDCN was the addition of the concept of Collective Efficacy to the theory.

Sampson, Raudenbush & Earls (1997) present Collective Efficacy as a central concept of SDT. Expanding on the work of Shaw and McKay they show that concentrated disadvantage alone does not cause crime but it does influence community norms. The mechanism by which they do this is through Collective Efficacy. They explain Collective Efficacy as "the differential ability of neighbourhoods to realize the common values of residents and maintain effective social controls"(Sampson et al., 1997, p. 918). Later they expand on this definition explaining:

> Collective Efficacy refers to mutual trust among neighbors combined with willingness to intervene on behalf of the common good, specifically to supervise children and maintain public order (Sampson, Randenbush, & Earls, 1998, p. 1).

This concept of Collective Efficacy is indeed a logical additional component of Shaw and McKay's original work as it provides the missing link between neighbourhood economics and the transmission of values. The work of Shaw and McKay (1969) foreshadows the addition of collective efficacy with their research in Richmond where they find "variations in the amount of control exercised by the community, and variations in extent of possible contact with criminals or criminal traditions." (Shaw & McKay, 1969, p. 312) leads to variations in delinquency rates.

Shaw and McKay (1969) explicitly focus on the community context in explaining crime. "Our attention has been focused too much upon the individual delinquent and not enough upon the setting in which delinquency arises." (p. 326). They also recognize the importance of a community instilling 'conventional' values in youth. When communities fail to do this Shaw and McKay argue "delinquency has developed in the form of a social tradition, inseparable from the life of the local community" (1969, p. 316). Collective Efficacy provides the key link between communities with 'low-economic status' and crime, as discussed by Shaw and McKay. Collective Efficacy is correlated with socio-economic status, residential stability and homeownership levels (Sampson & Raudenbush, 2001) hence why these factors help to explain crime. However, areas with high Collective Efficacy and other economic challenges tend to have lower crime rates (Sampson et al., 1998, 1997) as social bonds and individuals willingness to intervene to protect their community reduce crime.

With the revival of interest in SDT, scholars have begun to use a variety of spatial statistical techniques to test elements of the theory. Their approaches rely on the computational power of modern computers and thus were not available to Shaw and McKay. Law and Quick

(2013), for example, use Bayesian techniques to demonstrate that young offenders in York Region Ontario relate to socio-economic variables consistent with SDT. They find young offenders locations positively related to residential mobility, government transfers and ethnic heterogeneity. Each of these variables is consistent with Shaw and McKay's (1969) discussions of 'low-economic status' and each of these variables relates directly to the concept of Collective Efficacy. Interestingly, also consistent with the concept of Collective Efficacy, Law and Quick (2013) find that immigrant status was not related to the location of young offenders. Instead, ethnic heterogeneity was the causal factor. This is also consistent with the work of Sampson et al (1997) who found that immigrant concentration was not associated with homicide, but it was negatively associated with Collective Efficacy. These findings are consistent with SDT and suggest that Collective Efficacy is caused by the breaking down of social bonds in a community. Immigration's influence on social bonds typically results in more close-knit communities. However, if immigrants from different backgrounds settle in the same community this results in ethnically diverse neighbourhoods where there are weak associations between individuals due to their different backgrounds. This results in lower Collective Efficacy. Shaw and McKay (1969) gathered evidence in support of these findings.

> In communities occupied by Orientals, even those communities located in the most deteriorated sections of our large cities, the solidarity of Old World cultures and institutions has been preserved to such a marked extent that control of the child is still sufficiently effective to keep at a minimum delinquency and other forms of deviant behavior (p. 320).

The work of Ouimet (2000) adds nuance to these results using regression analysis (a standard technique today but one not available to Shaw and McKay) to demonstrate that immigration patterns impacted delinquency rates, with areas with immigrants from Asia and India having fewer delinquents and areas with immigrant from Haiti, Jamaica, and French Africa having

higher rates of immigrants (it is worth repeating that Ouimet notes that these findings are ecological and cannot be translated to the individual). These patterns are again consistent with the concept of SDT as presented by Shaw and McKay but they complicate the picture for Collective Efficacy, suggesting further research is needed.

Shaw and McKay were limited to correlation analysis in their original work. Fortunately, their book *Juvenile Delinquency and Urban Areas* contain maps with their detailed raw data for rates of male juvenile delinquency, male juvenile commitments, male court offenders, male school truancies, families on relief, median rentals, home ownership, and minority and immigrant heads of households. By inputting this data into a computer spreadsheet it is possible to re-test the original findings of Shaw and McKay (inputting this data also creates an appreciation for the amount of work Shaw and McKay completed to conduct their original study). This study aims to re-evaluate the work of Shaw and McKay using modern statistical techniques. It will specifically test if their original conclusions on the connections between male juvenile delinquency and "low economic status" in Chicago hold when accounting for spatial dependency and examining multiple variables at once. Through this analysis, clarity will be provided on the importance of the different variables tested by Shaw and McKay and the strength of the relationships between variables when controlling for the impact of multiple variables and spatial influences.

Methodology

Shaw and McKay (1942, 1969) demonstrated the connection between the neighbourhood and juvenile crime using case studies and correlation analysis. Using data from Shaw and McKay's 1969 book this study revisits these findings using modern spatial regression analysis, which became widely used after the 1979 publishing of *Spatial Econometrics* by Jean Paelinck and Leo

Klaassen (Anselin, 2010). This research focuses on the period from 1927 to 1933. Shaw and McKay (1969) examine three time periods in their study from 1900 to 1906, 1917 to 1923, and 1927 to 1933. The book provides a number of hand-drawn maps with data provided on a square mile block throughout Chicago. Unfortunately, these maps are not consistently provided for all time periods. The period from 1927 to 1933 contains the most maps and provides these maps with consistent geographies.

Data for analysis is pulled from eight maps of Chicago which divide the city into 140 square mile blocks. The maps list rates for the square mile block written out by hand. Male juvenile delinquent rates, for example, are 0.3 in Block 1, 0.5 in Block 2 and continue on in this manner to Block 140 which has a rate of 1.8. The data from these hand-drawn maps were typed into a spreadsheet file for analysis using the statistical program R.

Shaw and McKay (1969) have four questions which are appropriate to use as dependent variables for analysis. The first dependent variable explored is male juvenile delinquent rates from 1927 to 1933. From 1927 to 1933 there were 8,411 male juvenile delinquents. The mean rate is 4.2 for the City of Chicago as a whole and when examining the 140 square mile blocks in Chicago the median rate is 2.5.

Shaw and McKay (1969) share a map of male juvenile commitment rates from 1927 to 1933. From 1927 to 1933 there were 2,593 male juvenile commitments to prison. The mean rate is 1.8 for the City of Chicago as a whole and when examining the 140 square mile blocks in Chicago the median rate is 1.2. Male truant rates from 1927 to 1933 are also shared by Shaw and McKay (1969). A total of 3,653 male truants are reported in this time period for a mean rate of 1.8 and a median of 1.1. Finally, Shaw and McKay also include data from 1938 on the number of

boy court offenders. There were 4,060 boy court offenders this year for a mean rate of 3.6 and a median of 2.5.

Table #2: Dependent Variables			
Dependent Variables	Mean	Median	Cases (n)
Male Juvenile Delinquent Rates 1927 to 1933	4.2	2.5 (2.7*)	8411
Male Juvenile Commitment Rates 1927 to 1933	1.8	1.2 (0.7*)	2593
Male Truants Rates 1927 to 1933	1.8	1.1	3653
Boy Court Offenders Rates 1938	3.6	2.5	4060

*My replication of the study found slightly different median values as listed.

Shaw and McKay (1969) have four maps which provide useful independent variables for analysis. The first variable is the percentage of families on relief in 1934. According to Shaw and McKay (1969), the mean for the City of Chicago is 13.7% and the median is 10.6%. The second variable is the median monthly rent in dollars. Shaw and McKay (1969) did not provide the mean or median of this value. The median was calculated at $58.14. The third independent variable explored was the percentage of families owning homes in 1930. Once again Shaw and McKay (1969) did not provide the mean or median values. The median value was calculated as 33.6%. The final independent variable taken from Shaw and McKay (1969)'s maps was the percentage of immigrant and minority headed households in 1930. Shaw and McKay (1969) did not provide the mean or median values. The median value was calculated as 49.5.

Table #3: Independent Variables		
Independent Variables	Mean	Median
Families on Relief 1934 (%)	13.7	10.6
Median Monthly Rent 1930 ($)	-	58.14
Families Owning Homes 1930 (%)	-	33.6
Immigrant & Minority Heads of Families 1930 (%)	-	49.5

In addition, a variable was created that counts the number of square mile blocks each block is from the central business district. The distance from the central business district score was calculated using a queen matrix approach. Under this approach, any block that is touching,

even corner to corner, from the central business district is scored as a one. Any block that then touches any of the blocks scored as a one, once again even corner to corner, is scored as a two. This approach continues until all blocks are given a score. The smallest distance score is, therefore, a one. The largest distance score was a twelve.

Each of the dependent variables was tested using a series of regression models containing all of the independent variables. First, an Ordinary Least Squares regression analysis was conducted using these variables and the results of that regression were then tested for autocorrelation. This is necessary to determine if a regression model requires a spatial correction. Regression models with spatial effects require filtering out these effects or they may underestimate the strength of the relationships.

Moran's I is the most commonly used test for spatial autocorrelation (Anselin, 2001). The global Moran's I equation is as follows: $I = \frac{1}{2} \sum_{ij} W_{ij} Z_i Z_j \; \forall_i \neq j$ as explained in Ratcliffe (2010). When calculated Moran's I a value between -1 and 1 is obtained with "1" representing perfect autocorrelation and "-1" representing negative autocorrelation. Interpreting these values typically requires converting them to a Z-score. Z-score values above 1.96 indicate spatial autocorrelation significant at the 5% level. The detection of spatial autocorrelation in a regression model requires the use of a spatial regression model. Each of the four models tested in this study had a positive statistically significant Moran's I value (values ranged from 0.1 to 0.3, Table #4), thus requiring the use of spatial regression techniques.

Table #4: Moran's I Values	
Models	Moran's I
Male Juvenile Delinquent Rates 1927 to 1933	0.295***
Male Juvenile Commitment Rates 1927 to 1933	0.137***
Male Truant Rates 1927 to 1933	0.317***
Boy Court Offender Rates 1938	0.336***

* p < .05; ** p < .01; *** p < .001

Spatial lag and spatial error models are the two most common spatial regression techniques. Spatial error models are appropriate in circumstances where autocorrelation is an issue to be addressed but not the main research focus, spatial lag models assess if the variable of interest is impacted by variables in neighbouring areas (Bernasco & Elffers, 2010). When dealing with crime rate data, the spatial error model examines how the clustering of crime rates can be explained by the error terms of independent variables to capture the impact of unmeasured independent variables *(*Kubrin & Weitzer, 2003*)*. The spatial lag model uses crime rate data from neighbouring areas to asses if *"*crime in one place may increase the likelihood of crime in nearby locales." *(*Kubrin & Weitzer, 2003, p. 394*)*.

The spatial error model and spatial lag models both start with the standard regression model: $y = X\beta + \varepsilon$. The *s*patial lag model adds Wy as a spatially lagged dependent variable, and "ρ is a spatial autoregressive coefficient, [and] ε is a vector of error terms" (Anselin, 2001) to create a new equation as $y = \rho Wy + X\beta + \varepsilon$.

In the spatial error model a "non-spherical error variance-covariance matrix (Anselin & Arribas-Bel, 2011, p. 9)" is added to the general model creating a spatial error model as $y = X\beta + \rho W\varepsilon + u$. In this model, the crime rate is y, the matrix of independent variables is Xβ, the spatial weights matrix is W, the measures of the strength of spatial association is ρ, ε represents $y - X\beta$, and the error term is represented by u (LaRue & Andresen, 2015).

The introduction of the lag or error term thus accounts for the spatial autocorrelation in each model. For example, LaRue and Andresen (2015) use a Spatial Error Model in Ottawa to evaluate SDT and its ability to explain burglary, robbery, and motor vehicle theft, in relation to

the two local universities. They implement the spatial error model in their study after finding spatial autocorrelation in their data using Moran's I. In their regression they test a number of variables consistent with SDT such as unemployment rate, household income, education and distance to downtown. Based on their analysis they conclude "the results of this study were somewhat consistent with the theoretical expectations" (LaRue & Andresen, 2015, p. 207) of SDT.

Since the purpose of this study is to re-evaluate the work of Shaw and McKay, both a spatial error model and a spatial lag model are examined using each of the dependent variables. It is worth noting, that a Lagrange test was performed indicating that the spatial lag model is most appropriate test for each of the four models, but both spatial error and spatial lag models are shown here to demonstrate the impact of each approach. The spatial error model gives a sense of the spatial influence that is unmeasured by the dependent variables that were available for this study (Kubrin & Weitzer, 2003). While the spatial lag model accounts for the impact of crime rates in neighbouring square mile blocks (Kubrin & Weitzer, 2003), thus recognizing that juvenile delinquency often also impacts adjacent areas. Unfortunately, in both editions of Shaw and McKay's book (1942 and 1969), they only share maps with the rate data. The results, therefore, could potentially change using a method specifically designed for count data, such as Poisson regression.

Results

The spatial lag regression models were tested first (Table #5 summarizes these results). The first spatial lag regression examined male juvenile delinquency as the dependent variable. The overall model is statistically significant with a Wald value of 39.9 and a Likelihood Ratio of 33.7. Families on relief, median monthly rent and foreign-born, and minority headed families are each

statistically significant in the model. Families owning homes and the distance from the central business district were not statistically significant.

The second model uses male juvenile commitment rates as the dependent variable. This overall model is statistically significant with a Wald value of 12.8 and a Likelihood Ratio of 12.6. Families on relief, median monthly rent, foreign-born and minority headed families, and families owning homes are each statistically significant in the model. Once again the distance from the central business district was not statistically significant.

The third model uses male truant rates as the dependent variable. The model is statistically significant with a Wald value of 47.3 and a Likelihood Ratio of 38.0. Only families on relief and foreign-born and minority headed families are statistically significant. The remaining variables, median monthly rent, families owning homes and distance from the central business, were not statistically significant in model three.

The fourth model uses boy court offender rates as the dependent variable. This model is statistically significant with a Wald value of 31.5 and a Likelihood Ratio of 31.4. Families on relief, median monthly rent, families owning homes, and foreign-born and minority headed families are each statistically significant in the model. Distance from the central business is the only variable that was not statistically significant in model four.

The Rho value for each of the spatial lag models is no longer statistically significant indicating that the contributions of adjacent neighbourhoods to the equation has been accounted for by the independent variables (i.e. spatial effects are no longer an issue for the models).

The fifth model begins the spatial error regressions (Table #6 summarizes the results of the spatial error models). The fifth model conducts a spatial error regression with male juvenile delinquency as the dependent variable. The overall model is statistically significant with a Wald

value of 33.7 and a Lambda value of 33.7. Families on relief, median monthly rent, families owning homes, and foreign-born, and minority headed families are all statistically significant in the model. Only the distance from the central business district is not statistically significant in model five.

Model six uses a spatial error regression with male juvenile commitment rates as the dependent variable. This overall model is statistically significant with a Wald value of 11.3 and a Lambda value of 8.0. Families on relief, median monthly rent, families owning homes, and foreign-born and minority headed families are each statistically significant in the model. Once again only the distance from the central business district was not statistically significant.

The seventh model uses male truant rates as the dependent variable. The model is statistically significant with a Wald value of 82.6 and a Lambda value of 39.6. Families on relief, families owning homes and foreign-born and minority headed families are each statistically significant in the model. Both median monthly rent and distance from the central business district are not statistically significant in this model.

The eighth, and final model, uses boy court offender rates as the dependent variable. This model is statistically significant with a Wald value of 31.5 and a Lambda value of 34.8. Families on relief, median monthly rent, families owning homes, and foreign-born and minority headed families are each statistically significant in the model. Distance from the central business district is yet again the only variable that was not statistically significant in model eight.

Table #5: Spatial Lag Model				
Dependent Variable	Male Juvenile Delinquent Rates 1927 to 1933 (Model 1)	Male Juvenile Commitment Rates 1927 to 1933 (Model 2)	Male Truant Rates 1927 to 1933 (Model 3)	Boy Court Offender Rates 1938 (Model 4)
Intercept	-4.223***	-1.988**	-0.779	-6.330***
Families on Relief 1934 (%)	0.195***	0.080***	0.067***	0.163***
Median Monthly Rent 1930 ($)	0.032**	0.0167*	-0.002	0.061***
Families Owning Homes 1930 (%)	-0.017	-0.014**	-0.011	-0.030**
Foreign Born & Minority Headed Families 1930 (%)	0.051***	0.024***	0.019*	0.071***
Distance from Central Business District (Blocks)	0.026	0.017	0.045	0.052
Rho	0.417	0.311	0.513	0.414
Likelihood Ratio	33.675***	12.594***	38.018***	31.429***
Wald Statistic	39.895***	12.755***	47.324***	31.484***

* $p < .05$; ** $p < .01$; *** $p < .001$

Table #6: Spatial Error Model				
Dependent Variable	Male Juvenile Delinquent Rates 1927 to 1933 (Model 5)	Male Juvenile Commitment Rates 1927 to 1933 (Model 6)	Male Truant Rates 1927 to 1933 (Model 7)	Boy Court Offender Rates 1938 (Model 8)
Intercept	-0.630	-1.092	1.196	-3.267*
Families on Relief 1934 (%)	0.228***	0.090***	0.082***	0.194***
Median Monthly Rent 1930 ($)	0.032*	0.017*	0.001	0.060***
Families Owning Homes 1930 (%)	-0.032*	-0.020**	-0.021*	-0.043**
Foreign Born & Minority Headed Families 1930 (%)	0.041***	0.022**	0.019**	0.063***
Distance from Central Business District (Blocks)	-0.181	-0.041	-0.133	-0.133
Lambda	33.659***	8.006**	39.645***	34.832***
Likelihood Ratio	0.662	0.391	0.698	0.617
Wald Statistic	64.671***	11.260***	82.646***	47.91***

* $p < .05$; ** $p < .01$; *** $p < .001$

Discussion

The spatial lag regression models and the spatial error regression models provide strong evidence to validate Shaw and McKay (1942, 1969)'s interpretation of their data. Shaw and McKay found correlations between juvenile delinquency and percentage of families on relief, median monthly rent, the percentage of families owning homes, and percentage of the population which was

foreign-born or minority headed. Each of these findings has been validated as a predictor in the spatial regression models.

The strongest predictor in each of the regression models is the percentage of families on relief. This variable was statistically significant in all eight regression models at the $p = 0.001$ level. Percentage of families on relief provides the strongest measure of poverty available to Shaw and McKay and the results of this analysis show it is a strong predictor of juvenile crime. However, more recent SDT research has demonstrated that the impact of poverty is highly correlated with collective efficacy, which is a much stronger predictor of violent victimizations (Sampson & Raudenbush, 1999).

The percentage of foreign-born and minority headed families was also statistically significant in all eight regression models and it was significant at the $p = 0.001$ level in five of the eight models. Again this validates the work of Shaw and McKay, while also pointing to the possibility of Collective Efficacy as a missing variable. Immigrant concentrations have also been negatively associated with Collective Efficacy (Sampson et al., 1997). It is also likely that this variable is also serving as a proxy for poverty. The percentage of foreign-born and minority headed families and percentage of families on relief are correlated at the $p = 0.001$ level with a Pearson Correlation value of 0.68, providing strong evidence that poverty is a large part of the explanation for why the percentage of foreign-born and minority headed families are a predictor of male juvenile crime and delinquency.

Median monthly rents were statistically significant in six of the eight models. Median monthly rents were not significant in either of the male truant models. Median monthly rents were significant at the $p = 0.001$ level in the both of the boy court offender models. What is curious about the impact of median monthly rents is the positive correlation indicating that as

rent rates rose so did the number of male juveniles involved in crime and delinquency. Indeed, as would be expected, a Pearson correlation analysis shows median monthly rents are statistically significantly negatively correlated with ale Juvenile Delinquent Rates (r = -0.61), Male Juvenile Commitment Rates (r = -0.53), Male Truant Rates (r =-0.67), and Boy Court Offender Rates (r = -0.48). It is therefore likely that the median monthly rent is accounting for some unseen factor.

Percentage of families owning homes is statistically significant in all of the spatial error models, in the spatial lag juvenile commitment rates model, the spatial lag boy court offenders model. It is not statistically significant in the spatial lag male juvenile delinquent rates model or the male truant rate model. In each of these models, the percentage of families owning homes is negatively related to the dependent variable, as expected. This indicates that as homeownership rates raise the amount of juvenile crime and delinquency declines. This is consistent with the relationship between poverty and homeownership. It also provides further support for the importance of Collective Efficacy as homeownership is associated with higher level of Collective Efficacy (Sampson et al., 1997).

The distance from the central business district was not statistically significant in any of the eight models tested. However, a Pearson correlation analysis finds that the distance from the central business district on its own was statistically significantly related to each of the dependent variables: juvenile delinquent rates (r = -0.61), male juvenile commitment rates (r = -0.53), male truant rates (r =-0.67), and boy court offender rates (r = -0.48). The lack of significance in the spatial regression model can be explained by the distance from the central business districts' correlation with the other dependent variables. Distance from the central business district was statistically significantly related to the percentage of families on relief (r = -0.46), median monthly rents (r = 0.53), the percentage of families owning homes (r = 0.62), and percentage of

foreign-born and minority headed families (r = -0.41). The direction of the relationship in each case also aligns with expectations with families on relief and percentage of foreign-born and minority headed households falling the further a square mile block is from the city core. Similarly, as expected rents and homeownership rates rise further away from the city core. This indicates that though the distance from the central business district relates to juvenile crime and delinquency, the impact of this distance is a product of the relationship to other variables and not a result of the distance itself.

Conclusion

What is particularly remarkable about the work of Shaw and McKay (1942, 1969) in *Juvenile Delinquency and Urban Areas* is the volume of data collected and analyzed by hand. In the original edition of the book records of juvenile delinquency and rates of commitments were gathered in Chicago from 1900 to 1906, 1917 to 1923, and 1927 to 1933. In addition, court records were gathered for 1938 and school truancy rates from 1927 to 1933. They then supplement this data by gathering delinquency data for Philadelphia, Boston, Cincinnati, Cleveland and Richmond. The revised edition adds data about male juvenile offenders for Chicago from 1934 to 1940, 1945 to 1951, and 1954 to 1965 and for female offenders brought before the court from 1945 to 1951, 1958 to 1966. In addition, they include data about Cook county delinquents from 1945 to 1951, 1954 to 1957, and 1958 to 1966. Without the use of modern computers, Shaw and McKay (1969) made detailed calculations to determine the correlations between the various delinquency series and socio-economic variables. They also created detail maps to share their findings in *Juvenile Delinquency and Urban Areas*.

These maps are useful in re-evaluating the work of Shaw and McKay using modern methods. They allow for the manual imputation of Shaw and McKay's painstakingly gathered

data into modern computer spreadsheets which allows for the re-examination of Shaw and McKay's findings with modern spatial regression analysis. Spatial regression analysis validates Shaw and McKay's core findings. Families on relief, median monthly rent, homeownership rates, and rates of foreign-born and minority heads of households each has a statistically significant impact on crime associated with male juveniles in most of the models presented. Percentage of families on relief is the strongest predictor in each of the models, indicating the poverty is a strong predictor of male juvenile crime and delinquency. Distance from the central business is not significant in any of the models. Distance from the central business district is likely a product of other factors and not a direct cause of juvenile crime and delinquency.

In *Juvenile Delinquency and Urban Areas* Shaw and McKay (1969) took a step forward in explaining the spatial distribution of juvenile delinquency. Since the books original publication their work has become the framework for SDT which has aided in explaining the spatial distribution of crime generally. They have also provided a basis for interventions into crime within neighbourhoods which has allowed practitioners to effectively prevent crime by treating the individual alongside the community. These theoretical advances make *Juvenile Delinquency and Urban Areas* a seminal work and the practical implications make Shaw and McKay worthy of a "thank you" from countless communities.

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Chapter #4: The Social Disorganization of Intimate Partner Violence

By Anthony Piscitelli and Sean Doherty

Abstract

Recently, scholars have begun to recognize new theoretical connections between geography and Intimate Partner Violence (IPV). One such theory is Social Disorganization Theory (SDT). According to SDT, crime in communities can primarily be explained as a consequence of economic disadvantage, insufficient informal social control, lack of collective efficacy and family breakdown. SDT is typically used in the context of property crime and public violence. Recently, an emerging body of literature has begun connecting SDT to IPV. This article reviews this evolving literature proposing a unique and comprehensive concept map offering insights into how neighbourhood dynamics influence IPV. A series of questions and topics requiring further study are then proposed. This includes especially the need to distinguish between the impact of collective efficacy and socioeconomic conditions on neighbourhood rates of IPV, and further study of the impact of the Cultural Transmission of attitudes towards women in neighbourhoods.

Introduction

Intimate Partner Violence (IPV) is a global health problem. Broadly speaking, IPV as the name suggests, is violence occurring within the context of a romantic relationship. The work of Johnson and Dawson (2011) presents an overview of research and policy on violence against women with a focus on Canada. This work provides a useful definition of IPV.

> In the absence of a specific legal definition of Intimate Partner Violence, it is defined here as any type of physical or sexual assault, physical threat, threats with weapons, deprivation of liberty, psychological and emotional abuse, and stalking perpetrated against legally married or common-law partners, girlfriends, or female dating partners, whether the relationships are intact or estranged (Johnson & Dawson, 2011, p. 4).

This definition is conceptually broad enough to encompass the different ways IPV manifests itself while also including most individuals who are victims of IPV. It is worth noting that men can also be the victim of IPV but in the majority of serious cases involving bodily harm women are the victims (Burczycka and Conroy 2016).

According to a World Health Organization study of over 24,000 women in Bangladesh, Brazil, Ethiopia, Japan, Peru, Namibia, Samoa, Serbia, Thailand and the United Republic of Tanzania, lifetime rates of physical violence by intimate partners ranged from a low of 13% to a high of 61%. Lifetime rates of extreme physical violence (such as being kicked, hit with a fist or choked) ranged from 4% to 49% of women. Lifetime sexual violence by intimate partners ranged from 6% to 59% (Garcia-Moreno et al., 2006). These rates are alarming, as is the proportion of all crime that is made up of IPV. In Canada, a developed western economy, for example, in 2015 the rate of police-reported IPV was 309 incidents per 100,000 residents. Yet, this accounted for one-quarter of all violent crimes reported to police that year (Burczycka and Conroy 2016). Even more troubling is police-reported IPV is severely under-reported with only three in ten cases coming to the attention of police, indicating that in one year about 1% of Canadian women experienced IPV (Burczycka and Conroy 2016). Clearly, IPV is still a cause for concern warranting serious attention from researchers, policymakers, and practitioners.

Social Disorganization Theory (SDT) explains the spatial distribution of crime (Shaw and McKay (1942, 1969). This theory can provide a framework for understanding how neighbourhoods influence IPV.

A number of studies have found that the geographic distribution of IPV is not uniform and that IPV clusters within specific neighbourhoods (Benson, Fox, DeMaris, & Van Wyk, 2003; Browning, 2002; Burke, O'campo, & Peak, 2006; Burke et al., 2006; Cunradi, Mair,

Ponicki, & Remer, 2011; DeKeseredy, Alvi, & Tomaszewski, 2003; DePrince, Buckingham, & Belknap, 2013; Frye, 2007; Gracia & Herrero, 2007, 2007; Gracia, López-Quílez, Marco, Lladosa, & Lila, 2014; Gracia et al., 2014; Gracia & Tomás, 2014; Jackson, 2016; Kiss et al., 2012; Pinchevsky & Wright, 2012; St. Jean, 2007; Thompson & Gartner, 2014). Neighbourhoods with high levels of IPV tended to be located in low socioeconomic status areas (Benson et al., 2003; Gracia et al., 2014), with low levels of collective efficacy (Gracia & Herrero, 2007; St. Jean, 2007), higher social disorder (Gracia & Herrero, 2007) and lower levels of informal social control (Browning, 2002). This clustering of IPV suggests an opportunity to concentrate on interventions to proactively address the causes and deal with the consequences of IPV. Policymakers can be aided in these efforts through the use of a theoretical lens and conceptual framework to help guide policy interventions.

This paper examines SDT as a starting approach for understanding the geographic concentration of IPV. Through a review connecting the SDT literature to IPV, a new concept map is presented to offer insights into how neighbourhood dynamics influence IPV. The paper concludes with key questions for further study and consideration.

Social Disorganization Theory

While Shaw and McKay (1942, 1969) are seen as the founders of Social Disorganization Theory, the earlier work of Park, Burgess, and McKenzie (1925) was influential in shaping this theory. Park et al. (1925), argue the expansion of cities can be illustrated using a series of five concentric circles which radiate out from the center of the city.

In the Concentric Circle Model, the first circle is located at the downtown core of a city and it represents a city's central business district. The second circle is a zone in transition. It contains a mix of storefront businesses and manufacturing factories which is subsuming the

residential space. Employees of businesses operating in the first and second zones primarily inhabit the third circle. The fourth circle is comprised of expensive apartment buildings and single-family residential homes. Finally, the fifth circle contains the commuter zone which includes suburban areas. Often this fifth circle is located outside of the formal city limits but people in this area will be closely connected to the city. Park et al. (1925) explain that new residents, who are generally seen as unwelcome by current city residents, first move to an area near the Central Business District of a city then once family finances permit they continually try and move further from this city core.

> It is common observation that foreign races and other undesirable invaders, with few exceptions take up residence near the business center of the community or at other points of high mobility and low resistance. Once established they gradually push their way out along business or transportation thoroughfares to the periphery of the community (Park et al., 1925, p. 76).

In explaining the impact of migration and immigration on cities, Park et al. (1925) introduce the concept of disorganization.

> If the invasion is one of change in use [of property] the value of the land generally advances and the value of the building declines. This condition furnishes the basis for **disorganization**. The normal improvements and repairs are, as a rule omitted, and the owner is placed under the economic urge of renting his property to parasitic and transitory services which may be economically strong but socially disreputable and therefore able and obliged to pay higher rental than the legitimate utilities can afford. It is a well-known fact the vices under the surveillance of the police usually segregate in such transitional areas (Park et al., 1925, p. 76). [emphasis added]

Shaw and McKay (1942, 1969) expand upon this basic concept of disorganization to develop an explanation of social disorganization which would form the foundation of Social Disorganization Theory. Like Park et al. (1925), Shaw and McKay see social disorganization as primarily concentrated near the central business district at the city center.

> The spatial patterning of juvenile delinquency… is generally characterized by a high incidence in the areas of social disorganization adjacent to the main business, industrial,

> and warehouse districts toward the central part of the city and by relatively low rates in the outlying residential neighbourhoods (Shaw & McKay, 1942, p. 430).

Shaw and McKay (1942, 1969), focus primarily upon juvenile delinquency to develop the concept of social disorganization.

Shaw and McKay (1942, 1969) rely upon hand-drawn maps of juvenile delinquency rates for Chicago and other United States cities (the Canadian city Vancouver was also reviewed in their 1942 book) to show where juvenile delinquency was concentrated. By comparing the concentration of juvenile delinquency to demographics Shaw and McKay (1942, 1969) demonstrate a series of correlations with other socioeconomic challenges.

The geographic concentration of problems facing specific geographic areas creates difficulty for a family to instill traditional values in their children. Instead, Shaw and McKay (1942, 1969) argue Cultural Transmission Theory explains how neighbourhood attitudes are transmitted from teenagers to younger youth.

> The way in which boys are inducted into unconventional behavior has been revealed by large numbers of cases studies of youths living in areas where the rates of delinquents are high. Through the boy's own life-story the wide range of contacts other boys has been revealed. These stories indicate how at early ages the boys took part with older boys in delinquent activities, and how, as they themselves acquired experiences, they initiated others into the same pursuits (Shaw & McKay, 1969, p. 175).

Shaw and McKay (1942, 1969) process of transmitting delinquent and socially deviant values within a community, as discussed below, is also relevant for understanding attitudes towards women and IPV.

In the 1990s the Project on Human Development in Chicago Neighbourhoods (PHDCN) began empirically testing many of the theoretical underpinnings of SDT. The PHDCN examined by neighbourhood police data, socioeconomic data, survey data, systematic social observation of disorder and longitudinal data on childhood outcomes to study crime and deviance in Chicago

(Earls & Visher, 1997). This research led to the introduction of collective efficacy to SDT. Collective efficacy is the trust the develops amongst neighbours which allows them to intervene to help improve and protect their neighbourhood (Sampson, Randenbush, & Earls, 1998; 1997). Collective efficacy is a valuable tool in explaining variation in local crime rates. Though collective efficacy is typically correlated with socioeconomic conditions it is not a perfect match. Indeed, in areas facing socioeconomic challenges but with unexpectedly high levels of collective efficacy, the presence of collective efficacy helps explain the lower than expected crime rates (Browning, 2002; Sampson et al., 1998, 1997; Sampson & Raudenbush, 1999, 2001, 2004). Collective efficacy also has a role to play in protecting against concentrated neighbourhood IPV (St. Jean, 2007).

Social Disorganization Theory and Intimate Partner Violence

SDT suggests the concentration of neighbourhood crime is a result of the clustering of socioeconomic challenges which leads to a breakdown in social control and the cultural transmission of deviant values. SDT's focus on neighbourhood socioeconomic circumstances, social control, and values, suggests a number of concepts worth integrating to better understand the spatial distribution of IPV. The cluster of economic stresses in neighbourhoods is predicted to increases levels of IPV above and beyond what would be expected based on family challenges alone. This increase is explained by an increase in negative neighbourhood attitudes towards women which fosters conditions that encourage violence in intimate relationships. Reductions in collective efficacy, arising from the challenges associated with economic disadvantages, reduce the likelihood that neighbours will intervene to prevent IPV as it occurs.

A number of academics consider SDT as a mechanism to explain neighbourhood IPV (Benson et al., 2003; Browning, 2002; Copp, Kuhl, Giordano, Longmore, & Manning, 2015;

DeKeseredy et al., 2003; DePrince et al., 2013; Frye, 2007; Frye et al., 2008; Gracia & Herrero, 2007; Gracia et al., 2014; Jackson, 2016; Kiss et al., 2012; Pinchevsky & Wright, 2012; St. Jean, 2007; Thompson, 2014; Uthman, Moradi, & Lawoko, 2009). At the most basic level of the theory, the cluster of economic disadvantages in neighbourhoods is associated with higher rates of IPV (Benson et al., 2003; Gracia et al., 2014). However, there is some debate as to whether clustering results in higher rates within neighbourhoods or if economic strain simply places people likely to commit IPV in close proximity, thus creating higher rates (Kiss et al., 2012). In other words, does the neighbourhood where a woman lives impact her likelihood of experience IPV?

Collective efficacy and informal social control are negatively associated with neighbourhood IPV (Browning, 2002; DeKeseredy et al., 2003; Gracia & Herrero, 2007; Jackson, 2016). Collective efficacy also increases the chances that women will disclose when IPV occurs in their own relationships (Browning, 2002). It is possible that plays a role in explaining the connection between IPV and collective efficacy.

> [P]erceived neighborhood social disorder is negatively associated with residents' attitudes toward reporting domestic violence against women, probably as a result of a diminished sense of trust and collective efficacy (Gracia and Herrero 2007, 747).

Disorder is negatively connected to neighbourhood collective efficacy, that is as levels of disorder rise collective efficacy falls within a community (Sampson & Raudenbush, 1999). This suggests that collective efficacy could be connected to IPV though disorder may play some sort of a mediating role in this relationship.

St. Jean (2007), however, calls into question the relationship between disorder, collective efficacy and IPV. He argues that interventions are unlikely in domestic violence disputes and as such collective efficacy is unlikely to reduce IPV.

> Domestic disputes that occur behind closed doors are often beyond the scope of intervention by neighbors. Residents often consider domestic violence to be a private matter. Collective action to reduce domestic violence may be more effective when it takes the form of awareness and prevention than when it surfaces as an intervention during heated moments (St. Jean, 2007, p. 210).

St. Jean does find a connection between collective efficacy and incidents of IPV but he suggests "the presence of disruptive family members is the key variable in the relationship between low collective efficacy and high incidence of battery" (St. Jean, 2007, p. 209). He notes that in some areas with low collective efficacy there are no incident of IPV but in other areas, with low collective efficacy there are many incidents. The key difference, according to St. Jean (2007) is the presence of disruptive family members.

Separate studies by Frye (2008) and Copp et al. (2015) create further concern about the importance of collective efficacy as it relates to IPV. Both studies argue that individual factors are much more important than neighbourhood context as a cause of IPV. In addition, Dekeseredy et al. (2003) find that informal social control is not sufficient to reduce IPV. However, recent work by Jackson (2016) suggests a more complex relationship, whereby a women's socioeconomic status predicts if she will benefit from neighbourhood collective efficacy.

Despite some of these misgivings, how collective efficacy could work to influence rates of IPV warrants consideration. One possible example can be extrapolated from research on bystander interventions. In cases of sexual assault, men are more likely to intervene as by-standards if they believe other men would get involved if faced with a similar situation (Fabiano, Perkins, Berkowitz, Linkenbach, & Stark, 2003). It is possible that social control in neighbourhoods faces a similar dynamic. However, Frye (2007) found that "perceptions of neighbourhood social cohesion were not positively related to predicting the likelihood of enacting informal social control of either general violence or IPV."(2007, p. 1001). In this study

likelihood to intervene was assessed based upon answers to questions about "'a man is hitting his wife on the street,' 'a couple can be heard fighting violently in their apartment,' and 'a couple is fighting in the street and it appears that the man is about to hit the woman.'" (Frye, 2007, p. 1006). While this study meets its goals and helps to explain the relationship between social cohesion and IPV, Frye (2007) did not include a specific question asking about a respondent's perception of other male's willingness to intervene in case of IPV. The study also only interviewed 126 men, making neighbourhood generalizations difficult. Further research is therefore required to determine if a link exists between the perception of other men's attitudes towards intervention and action to intervene in cases of IPV.

Overall attitudes towards women within a community also warrant consideration, with respect to IPV. Shaw and McKay (1942, 1969) introduce Cultural Transmission Theory as an important component of Social Disorganization Theory. Originally this theory was conceived as a mechanism by which older teenagers introduced younger youth to socially deviant values. With respect to IPV, it is possible a similar clustering is occurring with respect to attitudes towards women, which creates conditions that encourage IPV within the home and the community.

There is research which suggests a causal link between neighbourhood attitudes towards women and IPV. In a qualitative study of 37 urban and 24 rural women which explored their perceptions of what relates to women's experiences of IPV in neighbourhoods seven clusters of factors were identified: "(1) deterioration contributor, (2) negative social attributes, (3) violence attitudes and behaviours, (4) stabilization contributors, (5) neighborhood monitoring, (6) communication networks and (7) community enrichment resources" (Burke et al., 2006, p. 190). The third cluster, violence attitudes and behaviours, includes macho attitudes about control, ignorance about IPV and gossip, amongst its sub-components (Burke, O'campo, and Peak 2006).

These qualitative findings directly suggest neighbourhood attitudes are an important contributor to overall levels of neighbourhood violence.

The causal link between negative attitudes towards women and IPV is a component of a number of theories including Social Learning Theory, Gender Role Theory, Feminist Theory and Masculinity Theory (Johnson & Dawson, 2011). Studies have also verified this link at an individual level and at a broader macro-level (Flood & Pease, 2009; Johnson & Dawson, 2011; Kiss et al., 2012). Attitudes towards gender roles are seen as particularly strong predictors of the condoning of IPV (Flood & Pease, 2009). Given this connection between attitudes and IPV, it is not surprising that previous researchers have discussed the impact of neighbourhood attitudes. The concept of 'cognitive landscapes' may be particularly useful.

> [C]ommunity context seems to shape what can be called *cognitive landscapes* or ecologically structured norms (e.g., normative ecologies) regarding appropriate standards and expectations of conduct. That is, in structurally disorganized slum communities it appears that a system of values emerges in which crime, disorder, and drug use are less than fervently condemned and hence expected as part of everyday life (Sampson & Wilson, 1995, p. 50).

Beson et al. (2003) suggest 'cognitive landscapes' can be extended beyond neighbourhood street crime and delinquency to also explain IPV in neighbourhoods. In testing neighbourhood impact on IPV Beson et al. (2003) found neighbourhood economic conditions, residential instability and male employment to be important predictors. In addition, by controlling for violence at a previous point in time they were able to determine that neighbourhood context exerted an independent influence on rates of IPV. However, data limitations did not allow Beson et al. (2003) to include direct measures of neighbourhood values or attitudes towards women.

Uthman, Moradi and Lawoko (2009) in a study conducted in sub-Saharan Africa provide a direct measure of the clustering of neighbourhood attitudes towards IPV. Their research finds that both individual factors and community dynamics influence attitudes towards IPV.

> Our finding that the association between attitudes towards IPV against women and socioeconomic position may vary between neighborhoods in sub-Saharan Africa gives empirical support to the existence of cross level interactions (i.e., between community and individual) associated with health-related behaviours such as attitudes towards IPV against women. This means that attitudes towards IPV against women may be a result of the interaction between a person and his or her place of residence. This suggests that interventions to change the underlying attitudes towards IPV against women should focus on places and people (Uthman et al., 2009, p. 1807).

Unexpectedly, in their findings, they also discover women were more likely than men to justify IPV as acceptable behaviour. It is, therefore, possible, that neighbourhood attitudes towards IPV may work on two levels. First, they may make it less likely for bystanders to intervene in circumstances of IPV. Second, they may make it more likely for women involved in IPV to accept their situation and not seek to leave the relationship.

Concept Map: Social Disorganization Theory and Intimate Partner Violence

The concept map (Figure #3) shows how the various elements of SDT reviewed above help to explain the spatial distribution of IPV. A concept map uses cross-links to show how different theoretical elements fit with one another to create an overall theoretical framework. The cross-links use single words and short phrases to explain how the sub-components of a theory fit together (Novak & Cañas, 2008).

The concept map is uniquely divided into three sections which connect different elements of SDT to Concentrated Neighbourhood IPV. The clustering of IPV within neighbourhoods documented by numerous previous studies (Benson et al., 2003; Browning, 2002; Burke et al., 2006, 2006; Cunradi et al., 2011; DePrince et al., 2013; Frye, 2007; Gracia & Herrero, 2007,

2007; Gracia et al., 2014, 2014; Gracia & Tomás, 2014; Kiss et al., 2012; Pinchevsky & Wright, 2012; St. Jean, 2007; Thompson & Gartner, 2014) can explain this concentration by connecting key elements of SDT to IPV.

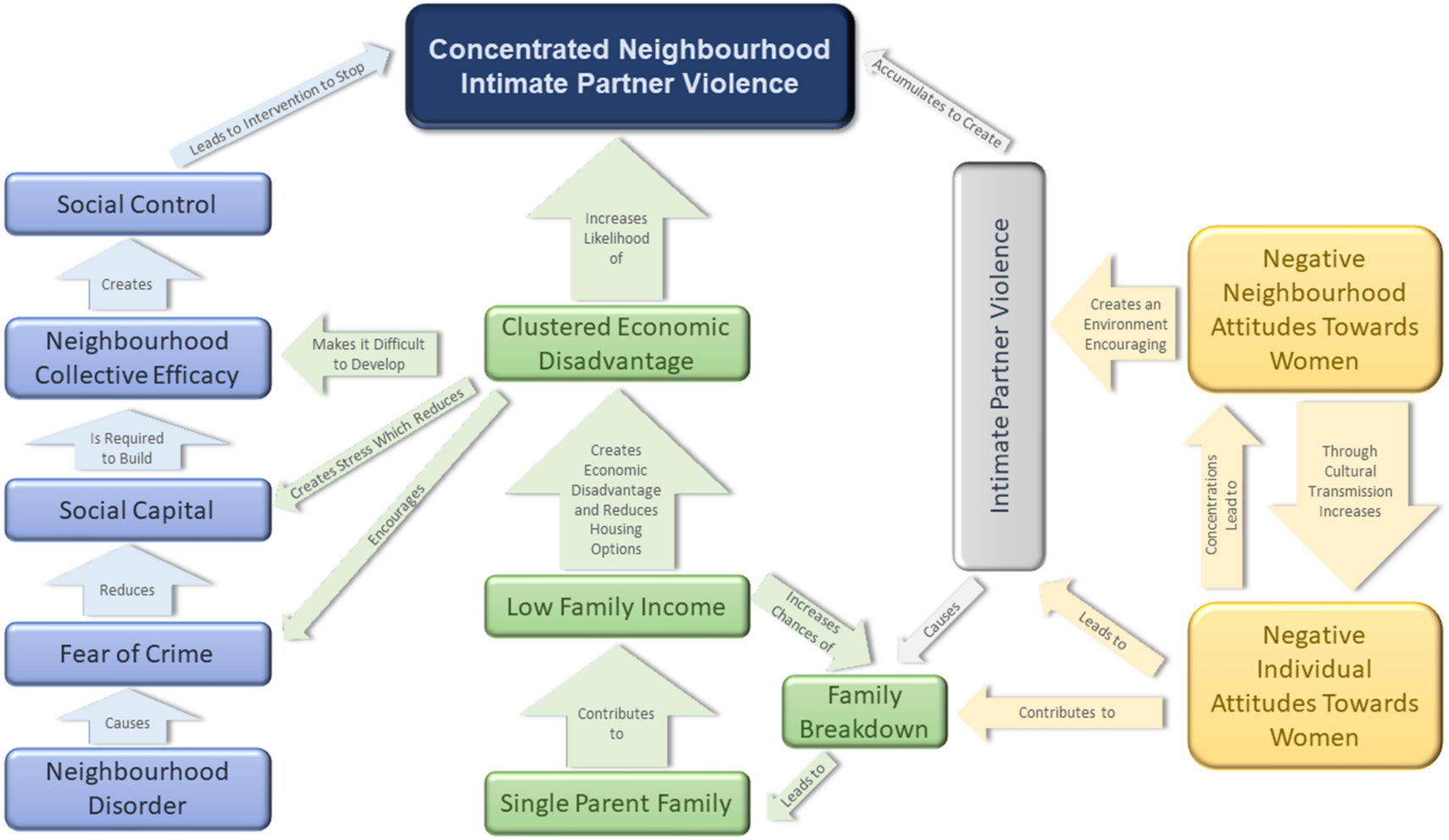

Figure #3: Social Disorganization Theory and Intimate Partner Violence

The right-hand side of the concept map introduces the importance of the Cultural Transmission of Values. Originally the idea of the Cultural Transmission of Values was used to explain how deviant values were passed along from older teenagers to younger youth (Shaw & McKay, 1942, 1969). In the context of IPV the focus shifts from deviant values amongst youth, to attitudes towards IPV itself, which connect directly to overall attitudes towards women in society.

In the concept map, a similar cycle is hypothesized to occur, as was found with youth, with respect to attitudes towards women. In this model, *Negative Individual Attitudes Towards Women* (please note each time a specific box in the concept is referred to the text will be capitalized and italicized to assist in finding the component) create an environment, which leads to the clustering of *Negative Neighbourhood Attitudes Towards Women*. Individual attitudes contribute directly to individual incidents of *Intimate Partner Violence* (Flood & Pease, 2009). In addition, community attitudes that condone *Intimate Partner Violence* and support traditional gender stereotypes create an environment encouraging individual incidents of IPV (Flood & Pease, 2009). These factors thus work to create an environment where IPV clusters accumulating to create *Concentrated Neighbourhood Intimate Partner Violence*. Simultaneously, the presence of IPV in a home directly causes *Family Breakdown* thus increasing the number of *Single-Parent Families* within the neighbourhood.

The presence of *Single-Parent Families* moves to the middle of the proposed concept map. The presence of *Single-Parent Families* in a neighbourhood contributes to a *Low Family Income* for that family and when concentrated it creates a *Clustering of Economic Disadvantage* (Benson et al., 2003). Facing a *Low Family Income* also reduces the mobility of families, making

it less likely they will be able to leave a neighbourhood they find undesirable in some way. Collectively, this *Clustering of Economic Disadvantage*, as predicted by SDT, leads to a concentration of IPV in the neighbourhood. This hypothesized relationship is consistent with existing research. Pinchevsky and Wright (2012) review a number of articles examining the connection between concentrated economic disadvantage and IPV and confirm that most studies find a positive relationship.

Concentrated economic disadvantage has also been connected to *Social Capital* and *Collective Efficacy*. The *Clustering of Economic Disadvantage* creates stresses in a community which erode *Social Capital* and in turn make it more difficult to develop a sense of *Collective Efficacy* (Sampson et al., 1997). These connections to *Social Capital* and *Collective Efficacy* move to the left side of the proposed concept map.

The left-hand side of the concept map begins with the concept of *Social Capital*. Putnam (1995) defines social capital as "features of social organization such as networks, norms, and social trust facilitate coordination and cooperation for mutual benefit" (Putnam, 1995, p. 67). The connections between people facilitated through social capital are a necessary pre-condition for the development of collective efficacy within a community.

Neighbourhood Collective Efficacy, in turn, creates conditions where informal *Social Control* is exerted by residents in a neighbourhood. "Social control refers generally to the capacity of a group to regulate its members according to desired principles-to realize collective, as opposed to forced, goals" (Sampson et al., 1997, p. 918). In a community, with a high level of collective efficacy, this informal social control should manifest itself through by-stander interventions to reduce and address incidents of IPV. It also creates an environment where

women are more likely to disclose IPV (Browning, 2002). The presence of *Neighbourhood Collective Efficacy*, therefore, can impact rates of neighbourhood IPV independent of economic circumstances. However, the economic circumstances of a neighbourhood can erode levels of *Collective Efficacy*, thus inhibiting the potential impact of collective efficacy.

Concept map as a Framework for Understanding Neighbourhood IPV

The concept map proposed in this article uniquely elaborates on how the various dimensions of SDT can be linked to provide a framework for understanding neighbourhood levels of IPV. Previous individual studies validate many elements of the concept map. Collective efficacy has been previously connected to IPV in neighbourhoods (Browning, 2002; Gracia & Herrero, 2007; St. Jean, 2007). Clustered economic disadvantage is associated with clustering of IPV in neighbourhoods (Benson et al., 2003; Browning, 2002; Pinchevsky & Wright, 2012; St. Jean, 2007). Additionally, there is research connecting attitudes towards women and IPV itself to levels of neighbourhood IPV (Burke et al., 2006; Flood & Pease, 2009; O'Campo, Burke, Peak, McDonnell, & Gielen, 2005; Uthman et al., 2009). While these individual studies provide support for individual elements of the model, a future research step should be a study testing the entire conceptual model.

There is a clear need for more studies examining the relationship between IPV, individual factors and neighbourhood impacts (Copp et al., 2015; Jackson, 2016). While many individual elements of this conceptual model have been tested there have been few studies attempting to distinguish the impact between various elements of the conceptual model. Indeed, what work that has been done combing elements of the model leaves more questions than answers. Browning (2002), for example, finds that when using individual's experiences of IPV as the

dependent variable neighbourhood collective efficacy was a good predictor of rates of IPV but concentrated disadvantage was not statistically significant. However, this model used individuals and not neighbourhoods as the dependent variable.

St. Jean (2007), in contrast, uses qualitative data to show a relationship between collective efficacy, economic strain and IPV. However, when examining quantitative data he finds a gap in the connections.

> What is important [when explaining IPV] is not simply whether collective efficacy levels are low, but where the low collective efficacy blocks are situated. If low collective efficacy blocks are situated in areas dominated by disruptive families, battery encounters will be higher. However, low collective efficacy on blocks that are not dominated by disruptive families will be matched with low incidents of batteries. Over time, collective action can encourage disruptive family members to moderate their domestic behavior, but the lack of such action is not the primary cause of those crimes. They are instead rooted in unresolved interpersonal conflict and private quests aimed at establishing domination over others (St. Jean, 2007, p. 193).

Central to the SDT's explanation of neighbourhood crime is a focus on individual economic challenges causing family stress and increasing the likelihood of IPV amongst individuals. St. Jean (2007) demonstrates that the relationship may indeed be more complicated. Economic strain and lack of collective efficacy in a neighbourhood may be contributing factors but they are not on their own sufficient conditions to predict the presence of high rates of IPV. Instead, individual behaviours are also an important consideration.

These findings echo Pinchevsky and Wright (2012) who argue researchers should focus on distinguishing between the impact of collective efficacy and socioeconomic factors on neighbourhood rates of IPV. This type of research is important to help clarify the SDT conceptual framework presented here. In addition, the negative relationship between clustered economic disadvantage and neighbourhood levels of collective efficacy (Sampson et al., 1998,

1997; Sampson & Raudenbush, 1999, 2001, 2004) suggests the connection between clustered economic disadvantage, neighbourhood levels of collective efficacy and IPV may be complex. The concept map acknowledges the connection between economic disadvantage and neighbourhood levels of collective efficacy but it is not able to distinguish between the most important factors. Is the clustering of economic disadvantage causing a concentration of individuals without options who are likely to experience IPV to live in the same neighbourhoods? Or are areas of clustered economic disadvantage eroding neighbourhood levels of collective efficacy thus creating the conditions which allow concentrated neighbourhood IPV? Additional research is required to clarify the answer to these questions.

St. Jean (2007)'s finding that low collective efficacy is not always associated with IPV also warrants additional consideration. What is unique about these blocks in comparison to those with low collective efficacy and high rates of IPV? St. Jean suggests it is the presences of a small clustering of a few individuals who choose to commit IPV in some neighbourhoods with low collective efficacy that account for higher rates of neighbourhood IPV. Additional empirical work is needed to validate these findings, but if it is indeed the case a number of questions arise. Are there individuals in high collective efficacy neighbourhoods who would commit IPV but are somehow constrained by the informal social control mechanisms? Or do individuals likely to commit IPV gravitate towards low collective efficacy neighbourhoods due to economic factors? Why do some neighbourhoods with low collective efficacy experience high levels of IPV while other areas with low collective efficacy do not? Additional qualitative and quantitative work is therefore required to answer these questions and distinguish between neighbourhoods where IPV rates are low in contrast to predictions by empirical models.

Future research in should also directly measure neighbourhood attitudes towards women and ascertain the impact of these attitudes on rates of IPV. Most of the work connecting neighbourhood attitudes towards women and IPV has been qualitative in nature (Burke et al., 2006; O'Campo et al., 2005). Part of the challenge of addressing this question using quantitative techniques is the cost of creating a survey with a large enough sample size to distinguish between neighbourhood attitudes. We believe this cost is warranted for future studies to help clarify the theoretical relationship and as a promising avenue for potential interventions.

Conclusion

SDT has made many important contributions to explaining the spatial distribution of crime and violence over the last 75 years. However, only recently have scholars begun to connect SDT and IPV. Many opportunities, therefore, still exist to elaborate on how SDT and IPV relate. The concept map presented in this paper is a starting point for additional analysis. However, existing research provides strong evidence that SDT can make a valuable contribution to explaining the concentration of neighbourhood IPV. The initial findings relating neighbourhood values and IPV are particularly promising as they suggest potential opportunities to prevent and reduce IPV.

In particular, Shaw and McKay (1942, 1969) demonstrate how neighbourhood values are shaped amongst teenagers and young adults through the Cultural Transmission of Values. The concept map presented here builds on this framework demonstrating how negative attitudes towards women can be culturally transmitted and thus contribute to IPV. Indeed, the existing evidence supports the connection between the clustering of negative and problematic attitudes towards women and IPV in some neighbourhoods (Burke et al., 2006; O'Campo et al., 2005). If this relationship is indeed accurate it suggests a promising avenue for interventions. Campaigns

to change attitudes in specific neighbourhoods towards women and IPV could have a positive impact on rates of IPV. This idea is, however, built on a number of suppositions and extrapolation, as such, the effectiveness of this approach will require additional testing.

First, this idea builds upon research showing that personal attitudes of individuals related to IPV can increase the likelihood that someone will intervene (Frye, 2007). That is to say, individuals who view IPV as a serious problem are more likely to intervene than those who do not see it as an issue. If neighbourhood attitudes are changed, it is therefore assumed, that more individuals will intervene to address IPV. Secondly, the notion that improving neighbourhood attitudes towards women will lead to more interventions builds upon research showing in cases of sexual assault men are more likely to intervene as a bystander if they believe other men are likely to intervene. If attitudes towards IPV were changes in some neighbourhoods part of the process should involve creating a cultural norm related to the intervention. In this way, addressing IPV through attitudes could also be linked to collective efficacy and informal social control. Thus creating a neighbourhood where addressing IPV is seen as everyone's responsibility.

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Chapter #5: Distinct Places to Address Intimate Partner Violence

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Abstract

The concept of place can be used to address intimate partner violence (IPV). Place, to geographers, is a concept that helps explain how human experiences shape a sense of meaning surrounding locations. Using a Grounded Theory approach and qualitative interviews with service providers we present a case study exploring how Brantford social service agencies apply placemaking strategies and take advantage of the elements of place to reduce the harm associated with IPV. Six themes arose in the interviews. Home, the women's shelter, courts, and schools were found to represent unique areas where placemaking strategies help to reduce harm. Hair salons emerged as a unique place to reach victims, whereas prison was a place that encouraged offenders to make changes. These themes show the concept of place has the potential to add insights into how IPV can be reduced and the traumas facing victims addressed.

Introduction

Intimate partner violence (IPV) is defined as "any type of physical or sexual assault, physical threat, threats with weapons, deprivation of liberty, psychological and emotional abuse, and stalking perpetrated against legally married or common-law partners, girlfriends, or female dating partners, whether the relationships are intact or estranged" (Johnson & Dawson, 2011, p. 4). IPV incidents typically occur in the home, be it a single-family house, apartment, condo, townhouse, or some other dwelling type. Regardless of the form it takes, home is a place packed with meaning for the inhabitants (Mallett, 2004; Mah, 2012). When IPV occurs in a space, like

the home, it adds to the sense of meaning victims and offenders feel when in that place. Yet, practitioners seldom consciously think about place when addressing IPV.

When criminologists think of place they tend to focus on a point on a map or small geographic area like a parking lot. For example, in an introduction to a special issue on crime and place in the *Journal of Research in Crime and Delinquency* Maxfield (2011) says:

> In the strictest topological sense of the word, a place has no spatial extent; it is an X-Y coordinate that is a point in space. In practice, criminologists have expanded this definition to include very small spaces such as buildings, intersections, street segments, and special use areas. (4).

Eck (2002) in the book chapter *Preventing Crime at Places* in *Evidence-Based Crime Prevention* uses a similar definition of place to explain his prevention focus.

> A place is a small area reserved for a narrow range of functions, often controlled by a single owner, and separated from the surrounding area. By 'small' we mean that a location is smaller than a neighborhood. Often a person standing anywhere within a place can see or hear activities in any other part of the place…Places include stores, homes, apartment buildings, street corners, subway stations and airports (241).

In contrast, geographers would typically define a point on a map or a building as a micro-level space (Brantingham & Brantingham, 1981). A neighbourhood would be considered a meso-level space and the city as a whole a macro-level space (Brantingham & Brantingham, 1981).

Place, to geographers, "are all spaces which people have made meaningful" (Cresswell, 2004, p. 7). Place refers to bounded space (Matthews & Herbert, 2008) which is shaped and transformed by people (Pred, 1985). Geographers exploration of place, therefore, focuses on place as the "practices as well as affective experiences" (Gieseking, Mangold, Katz, Low, & Saegert, 2014, p. xx) of a physical space. A place can include concepts such as a neighbourhood, a city, a state or province, or a country. Place is more than the physical boundaries of a space, it

also includes the practices and customs of the people living and interacting with an area (Gieseking et al., 2014).

Place, as defined by geographers, provides a broad theoretical framework that can help expand how the world is understood. While at an abstract level the conceptualization of place can be difficult to understand, specific examples can demonstrate the power of the concept. For instance, Anderson (1987) uses the concept of place to demonstrate how 'Chinatown' was created as a social construct in Vancouver, British Columbia in the late 1800s and early 1900s. The actions taken by the city government ensured that Chinese immigrants would cluster together, and by not providing adequate services, the city worsened existing stereotypes and prejudices. Anderson thus demonstrates the usefulness of place as an academic tool. She shows that place can be used to illuminate the relationship between institutional actions, societal perceptions, and meso-level spaces.

In a more recent example, Mah (2012) connects urban decline associated with factory closures in three communities to the concept of place. In her wide-ranging book, Mah shows that the job losses people immediately experience are amplified by their attachment to their geographic communities. The closures are then felt for decades after they occur, even amongst those who find new employment, as they change the way people live their day-to-day lives. The closures reshape the physical landscape creating short-term challenges but the potential for opportunities in the long term. Mah (2012) describes this all using the concept of place.

Places also have a special attraction for people. They lead to attachments and become more than just a physical space through a process described as place attachment:

> *Place attachment* is the symbolic relationship formed by people giving culturally shared emotional/affective meanings to a particular space or piece of land that provides the basis

> for the individual's and group's understanding of and relation to the environment (Low, 1992, p. 165). [Italics in original]

People are attracted to the physical properties of a micro-space as well as the "interpersonal, community and cultural relationships" (Low & Altman, 1992, p. 7) occurring there. Mah's treatment of home and place attachment is particularly noteworthy to this study. She found people who lived in communities facing significant factor closures felt a sense of "devastation, but also home" (p. 171). The homes in these communities were still places they were proud to have built and associated with memories but there was also a strong understanding of what was lost. Residents were aware of the decline and higher levels of poverty being experienced within these areas but they still remained attached to their homes for nostalgic reasons. The attachment people have to micro-level spaces, like the home, creates opportunities to shape them into places to address issues such as IPV.

A significant body of research examines the geography of IPV at the meso-level. Within neighbourhoods, the cluster of economic disadvantages (e.g. a high presence of low-income families, single-parent headed households, unemployment etc.) is associated with higher rates of IPV (Benson et al., 2003; Gracia et. al., 2014; Kiss et al., 2012). The literature is not clear if the clustering of economic strain directly causes IPV or if economic strain simply places victims of IPV in close proximity to one another (Kiss et al., 2012). Within neighbourhoods, it is also possible that economic factors correlate with attitudes towards gender roles. Flood and Pease (2009) find attitudes towards gender roles are strong predictors of the condoning of IPV, which in turn can create conditions that perpetuate IPV.

St. Jean (2007) connects the meso-level to the micro-level showing that interventions by neighbours can help reduce IPV, but if neighbours are unwilling to intervene it will not cause IPV. For IPV to occur an offender is required.

> "Over time, collective action can encourage disruptive family members to moderate their domestic behavior, but the lack of such action is not the primary cause of those crimes. They are instead rooted in unresolved interpersonal conflict and private quests aimed at establishing domination over others." (St. Jean, 2007, p. 193).

St. Jean (2007) stresses the importance of the micro-level by showing that it is offenders present in an individual home that leads to IPV. Community actions can assist in these circumstances but absent an offender, no action is needed. This article will explore how social service agencies in Brantford, Ontario use the specific elements of different places to address IPV and how these agencies use placemaking approaches to create safe spaces for victims. Placemaking approaches can take many forms. Cresswell (2004), for example, cites a number of examples. "Homeowners redecorate, build additions, manicure the lawn. Neighbourhood organizations put pressure on people to tidy their yards; city governments legislate for new buildings to express the spire of particular places" (Cresswell, 2004, p. 5). These examples include action at Brantingham and Brantingham's (1981) micro-level (the home), meso-level (neighbourhoods) and the macro-level (city-wide efforts). In this article, a number of approaches to addressing IPV within micro-level spaces will be discussed.

Brantford is located in southwestern Ontario about an hour drive south-west of Toronto. Brantford has a population of 98,179 (Statistics Canada, 2016). Many social service agencies in Brantford also provide services to the surrounding county of Brant County, with a population of 36,707. Some of Brantford also sits on a Six Nations reserve, which is primarily located just

southeast of the city. Brantford was selected for a research location for this case study as it has the highest rates of family violence in southern Ontario (Burczycka & Conroy, 2016).

Methodology

This study takes a grounded theory approach to explore how social service agencies use place to address IPV. Grounded Theory is an approach to research where a theory is extracted from the experiences of research participants (Glaser, 1992; Glaser & Straus, 1967; Straus & Corbin, 1990). Instead of a verification of an existing theory, Grounded Theory allows the research participants to share their experiences for the purposes of theory creation (Glaser, 1992; Glaser & Straus, 1967; Straus & Corbin, 1990). The approach is ideally suited to situations where little theoretical work has been previously completed (Glaser & Straus, 1967). The study of how place can be used to address IPV is thus ideally suited, as the research team could find no specific studies exploring this topic.

Using a grounded theory approach the focus is on theoretical sampling. Thus, instead of focusing on a random sample of participants, the researcher focuses on sampling ideas by purposefully including participants with different perspectives on the issues discussed. Sampling continues until participants do not yield new ideas, referred to as theoretical saturation (Glaser, 1992; Straus & Corbin, 1990; Straus & Glaser, 1967). In qualitative studies, themes begin to emerge typically after six interviews and theoretical saturation is typically reached within 12 interviews (Guest, Bunce, & Johnson, 2006).

Participants to this study were recruited through cold calling and emailing employees at social service agencies that deal directly with incidents of IPV in the Brantford, Brant County, and Six Nations, including government departments and non-profit sector organizations. Semi-

structured interviews were held with 12 employees. One of these interviews involved four employees, one involved three employees and five interviews were conducted with individuals. Participants held various roles, including direct service roles and management positions. Interview questions explored the participants work experiences, the role their agencies played in addressing IPV, and the characteristics of victims and offenders. The original interview guide contained six questions with some anticipated probes:

1. What do you and your agency do to work with victims/offender of interpersonal violence?
2. As you may be aware Brantford has one of the highest rates of IPV in Ontario. What do you think explains this higher than average rate of IPV in Brantford?
3. Are there any common characteristics you see amongst victims/offenders of IPV? Probes: Their geography within the city? Their socio-demographics? Their age? Other characteristics?
4. Some of my background research on the City of Brantford suggests there are some historical events that may have impacted the development of the city in ways related to IPV. Are there any historical developments in Brantford that you think may be related to the higher rates of IPV today? Probes: The closure of the Massey Ferguson Plant, the Mohawk Institute Residential School in Brantford, The opening of Casino Brantford
5. What is working to prevent IPV in Brantford?
6. What do you think should be done to further reduce IPV in Brantford?

Consistent with a Grounded Theory approach, from the first interview probes were adapted mid-interview to explore in more detail topics that research participants shared. This included introducing participants to the emergent themes from earlier interviews and asking for feedback. The insights from these discussions proved to be extremely useful in selecting the final themes. All but one interview was audio recorded and transcribed. For the one participant that asked not to be recorded, detailed notes were taken by the interviewer. Results of all interviews were analyzed with an open coding scheme (Glaser, 1992) using the Dedoose software system.

Results

A total of six themes for addressing IPV emerged within six distinct places: home, the women's shelter, prison, hair salons, courts, and schools, as discussed in detail in the sections below. Each of these themes demonstrated different approaches to using place to address IPV. Home, the women's shelter, courts, and schools demonstrated approaches to placemaking where social service agencies attempt to change a place to improve its characteristics to prevent harm to victims from IPV. Hair salons were used as an area where social service agencies took advantage of the unique elements of place to assist victims. Prison, similarly, was an area where social service agencies used the elements of a place to reach offenders.

Home

The home for many people is the place "where you can be yourself" (Cresswell, 2004, p. 24). It is often described as a refuge (Mallett, 2004) or an intimate space (Cresswell, 2004). In contrast, the participants in this study spoke of home as a place where violence is common. For instance, one participant stated, "Violence in [the] home is normal or automatic reaction", whereas another stated that in some houses violence "is super normalized in the home". A participant who worked with youth explained that violence in the home has a long negative impact on children as well, creating a cycle of violence, stating:

> "I have never seen a client or offender where the parents have been together for 30 years and it's been a healthy environment. Those kids don't come. I don't get them with domestic violence charges; sometimes stealing and drugs and stuff like that."

It is against this backdrop that the participants described the work social service agencies in Brantford are doing to try to change the home environment to create a safe space for victims. This is done by working with both the offenders and the victims.

Participants described a number of strategies that are being used to eliminate recidivism with offenders to eliminate violence in the home. These strategies were typically taught to offenders in group programming or occasionally in one-on-one sessions. For instance, one participant described what they tried to teach clients to do when faced with a domestic situation, and that when they got angry instead of resorting to violence they should to do things like:

> "Taking a walk, removing yourself from the situation, writing down your feelings, calling a friend and venting, calling your parents if you have a close relationship, just getting the anger out and then discussing when cooler heads prevail."

Ultimately, by teaching offenders to avoid falling into the same traps that led them to violence it was hoped that in future IPV would be reduced in the homes of Brantford.

Participants also reported that their social service agency was also working with victims. Participants recognized that not everyone who faces IPV could leave or even would want to leave the situation. In addition, even if they do leave, there is always the possibility that their current partner could return to the home to cause problems or that their next partner would perpetrate IPV as well. Participants also described strategies they taught to victims of IPV to make the space safer for victims. For example, one participant described very specific strategies they taught to victims.

> "If they are returning to their home or their abusive partner, helping them stay safe in that environment….being aware of your exits and what rooms you are in if things are escalating, being prepared to leave quickly, so knowing the resources, always having a cell phone, always having a bag packed, talking to the kids a little bit on what might happen and how to get help if they are feeling afraid."

By teaching the victims strategies like this, participants hoped to create a home environment where victims felt safe. In this way, the home could become a place of safety and refuge.

Women's Shelter

People often experience a strong attachment to where they live due to the bonds they experience with their neighbours and community (Fried, 2000; Gustafson, 2001). For many people, the bonds associated with home are such that leaving would be accompanied by an extreme sense of loss:

> It is a disruption in that sense of continuity which is ordinarily a taken-for-granted framework for functioning in a universe which has temporal, social, and spatial dimensions. From this point of view, the loss of an important place represents a change in a potentially significant component of the experience of continuity (Fried, 1963, p. 163).

It is not hard to imagine, that individuals fleeing a home to avoid IPV will experience similar feelings of loss and disruptions to their lives. Participants explained that the social service sector in Brantford recognizes these challenges and attempts to mitigate these disruptions by creating a shelter system that is welcoming, safe, and supportive of recovery.

Keeping in mind the goal to create a safe environment for women the women's shelter in Brantford grew into a one-stop shop for services for victims of IPV. Participants described the women's shelter extensive services, which includes services for women victims of IPV and their families, a 24-hour crisis line, 8 units of transitional housing, and services for homeless women.

Women visit the women's shelter for a variety of reasons, as was described by a participant.

> "The shelter provides emergency shelter, safe space for people who are needing protection or if it is not that extreme just some support to leave their relationship or take a break from it depending on what is happening."

Notice, this explanation allows for the possibility that women may return to their relationship or may decide to leave permanently. This approach of non-judgemental support in a safe space leads to the two key points surrounding the shelter theme.

Within the women's shelter, there are two major goals described by interview participants. The first was to help women stay safe from their abusive partners and to feel safe. The second goal was to aid in recovery. The women's shelter excels at both of these goals through a placemaking approach.

Participants explained that the women's shelter takes the safety of the women and children in its care very seriously. The shelter has an elaborate security system and a number of protocols to ensure women feel safe. Indeed, in one interview it was explained that the women's shelter is "more secure than the police station." One participant described the security approach in more detail:

> "[The women's shelter has] quite an extensive security system…cameras all over the building, you can't walk into [the women's shelter]…[the women's shelter] staff often do safety planning individually but also as a group…whether its personal safety, internet safety, just general safety."

The second part of the women's shelter theme, explains how the shelter creates a place that can aid in recovery.

> "[The shelter staff] try to make the shelter fell as home-like as possible, so everybody has their own bedroom, some share a bathroom, their doors are coded so not anyone can walk into their room so their belongings are safe… [the shelter has] a house cook who prepares dinner and tries to have that piece of the home feel…really just try to make it as comfortable as possible…[staff] try to connect with the women…how they are feeling…encourage families to continue with their routines, helping them figure out how they are going to get through their morning, get to school all that kind of stuff."

This description provides an overview of the approach the women's shelter takes to supporting victims. In addition, it was explained that the women are given their own room within the shelter, a space that they can be alone within or with just their families. The women are also provided with services to support recovery.

The services at the shelter take a multifaceted trauma-informed approach. The shelter takes in women facing a variety of issues with a variety of different goals. Staff at the women's shelter are prepared to deal with many different issues facing the women and are open to supporting the women in an approach that respects their wishes.

> "A lot of [shelter] clients are coming in after experiencing domestic violence but also experiencing other issues like mental health, addiction, parenting stuff, just anything and everything really…. [the shelter helps] them connect with supports that can support…trying to move them through the shelter to a life free of [the shelter]. So, whether that's going back to their original home, maybe they are working together with their partner to fix their relationship or make it more healthy, maybe they are going to move independently or move in with family, [The women's shelter] support whatever it is that they are wanting to do, and some people stay one day some people stay 3, 4, 5 months it's just kind of depends on what their needs are and how they are doing in the shelter."

Notice that the services provided here are focused on assisting the women in a non-judgemental and supportive manner.

The children are also given their own specific services. These services are led by trained professionals as described by a participant. "[The shelter has] children's program which is kind of its own entity working with moms who are living in the shelter and their children…[with] ECEs and the youth workers." Ultimately these services are designed to help the entire family grow and prepare to leave the shelter, as was also described.

> "Up in the shelter…[there is]lot of work around self-growth and life skill and helping the families up there kind of earn or relearn the skills they need to start over, and once they are ready to move on from here."

The focus on the family unit was described further in another interview.

> "The family is assigned a case manager, who is one of the shelter workers who help them figure out a plan, set some goals, navigate the system whatever it is they are wanting really."

By allowing women to focus on self-growth the women's shelter is trying to create a place specifically suited for recovery.

The efforts to create a safe space and give the women in the shelter a sense of ownership are perceived to be working. One participant put this sentiment succinctly stating that the shelter "it's kind of their own space". Despite the stated effectiveness of the shelter itself, it is difficult to support women if they are unable to receive services in the shelter.

The women's shelter faces space challenges and often the shelter is at or near capacity, creating challenges for the agencies when they have victims in immediate need.

> "The shelter is always full, it is hard to get a client into the shelter because they just don't have enough beds and you know really the last couple of months if you had to look outside the community most of southwestern Ontario the shelters have been full like it's a struggle to find a bed for somebody to get into a shelter."

Fortunately, if a woman reaches out for support the women's shelter has the ability to place women in motels or other shelters on a temporary basis to assist women leaving situations involving IPV.

Hair Salons

Discussion with participants in the study revealed a program in Brantford that takes advantage of the unique nature of hair salons. Participants explained that the shelter and other social service agencies also face challenges associated with reaching everyone who is facing IPV. According to participants, social service agencies in Brantford realized that women feel comfortable in hair salons. They also realized that hair salons are places that are dominated by women, where men seldom go and where they likely do not feel welcome to go. In order to take advantage of the unique benefits offered by these places, Brantford introduces the Hairspray program. The program was described by one participant as follows.

> "The Hairspray program which is working with the salons and making sure we have info in there for women in a discrete way because that's often one place that their partners don't go with them is when they are going to get their hair done and they tend to talk to their hairdressers about a lot of stuff and an opportunity to provide them with information they might not otherwise be available."

The Hairspray program thus takes advantage of the benefits of hair salons as a place to use them to reach women who may be facing IPV. One of the advantages of these places is that women feel comfortable talking and sharing their experiences. Another interview described how the Hair Spray program staff operate.

> "[The Hairspray program staff are] getting out into hairdressing salons and educating the staff about warning signs around domestic violence I guess it has been found that a lot of women talk quite openly with their hairdressers and that is a place that they feel safe and comfortable and sometimes their reaching out and they don't realize it and the hairdresser or the person doesn't always recognize what it is they are needing….we have expanded it out to nails, esthetics, and to train the employees on how to respond to that and how to refer without causing more harm."

Hair salons are places uniquely suited to supporting victims of IPV and aiding them in reaching services. The absence of males and the natural inclination in these places to speak openly created an environment where disclosures of IPV can naturally occur. According to participants, the Hairspray program took advantage of this reality and is provided training to hairdressers to encourage them to provide a type of triage support and make referrals to the appropriate agencies.

Prison

Brantford service providers also described using the unique elements associated with prison, a place uniquely suited to the service providers advantage, to reach offenders of IPV. The prison was a challenging environment for the offenders. Immediately after being arrested exhibited the accused exhibited many different behaviours according to an interview "anything from

compliant to combative to suicidal." Participants explained that they sometimes had difficulty encouraging offenders to change but the prison was a different environment. One participant explained this different simply stating, "jail offenders don't like at all – Don't take probation seriously". Participants report that the discomfort and emotional distress offenders felt in jail make it an ideal place to reach out and encourage them to try and stop committing IPV:

> "I have been to jail to see some of our guys, while they are awaiting their charges, that is something I wish we would get to do more of I mean out funding is very limited for that kind of work but I mean it is kind of a valuable thing, because you see someone when they are incarcerated, and it it's the most vulnerable you will ever see that person at that time where they are willing to listen and hear you at that time, I wish we got to do that more but that's something that we have got to do a little bit here."

Unfortunately, this is a place that also represents a lost opportunity. While prison can be ideally suited for reaching some offenders and encouraging them to make changes, participants explained that lack of resources within the non-profit sector means social service agencies are not often able to reach offenders when they are in prison.

Court

The legal process often requires offenders and victims of IPV to attend court. Within Brantford, there are three types of court housed in two buildings that victims and offenders may end up visiting:

> "There's the provincial courthouse, there is the superior which is federal law, and there is the criminal court law, which is diverted to the provincial courthouse which is a different legal system than family"

Each of the courthouses represents places where conflicts can occur, which can be harmful to victims of IPV. Whether in court for a criminal case or dealing with divorce proceedings involving child custody, the court process itself can lead to trauma for victims. This has led the social service sector to provide supports: "We [Non-Profit] support court for women and families

that are meeting in either family court or criminal court." Despite this assistance, being in court can lead women to feel unsafe:

> "Conflict happens is in the court system, we spend a lot of time at the court system and our judges will tell you it's fairly unsafe because you have both sides in that building plus family members and once domestic violence happens a lot of the issues and problems become legal"

So in addition, to providing support to address the emotional needs of victims, the courthouses have taken steps to ensure the safety of women in the courthouses. For example, "the courts have really done a lot in Brantford to try to make it more secure, they have checks when you come through". The courts also provide help to ensure the safety of women around the courthouse. For example, "security has walked people back to their cars after hearings and those kinds of things just to help protect." These steps are being taken to address the reality associated with the courthouses as a place. The court process means women can often feel vulnerable and unsafe. Indeed, the presence of their offender may mean they are actually unsafe in the space. The social service sector and justice system appear to have recognized these challenges and taken steps to protect women and address the emotional challenges of being in the courthouse.

Schools

Schools were the final place that emerged where the themes for addressing IPV were distinct. Schools emerged as places where the children of victims of IPV often exhibited signs of the trauma they were addressing. A participant described how they try and help the school recognize and understand the behaviours being exhibited by children.

> "Sometimes we have to help them move a school or advocate with the teacher and principal around safety or just understanding behavior abnormalities that kind of stuff so people from our children's program will actually go to the school with mom to support talking to the teacher or helping the school system understand the behaviours that the children are exhibiting, due to the impact [of witnessing IPV]"

By helping schools understand how children are experiencing the impact of IPV the social service agencies hope to create a school environment where students can process the trauma they are undergoing.

The school system was also an emergent area for the social service sector where they saw opportunities to do more work. Recently they had begun working on new preventative programming, as was described in one interview.

> "We're trying to do more in the school system, some preventative stuff and just info sharing about what kind of to look for and how domestic violence and impact these kids and their families so that's just kind of getting off the ground, like the hires are just happening now so I'm sure that will grow into its own."

According to participants, the schools also represent a place with the opportunity to support prevention. Research supports this belief, as studies show the children of victims of IPV can become offenders or victims themselves (Flood & Pease, 2009; Johnson & Dawson, 2011). Implementing prevention programming in schools can turn these into environments that can support breaking the cycle of violence.

Conclusion

The concept of place has the potential to add insights into how IPV can be reduced and the traumas facing victims addressed. Previous research has not specifically addressed this perspective, making a grounded theory using a case study an ideal approach to gleaning insights into how place and IPV are related. Six unique themes were discovered relating distinct places to addressing IPV in Brantford: home, the women's shelter, prison, hair salons, courts, and schools. Despite these results being based on a single case study, with the exception of the innovative work being done in hair salons, the themes are likely to be repeated in most cities as

courts, homes, schools, prisons, and shelters are common elements of the criminal justice and social service sectors.

A single case study in one city does face limitations. First, it is possible the case study can be a unique perspective not indicative of how other areas address the issues. As noted, this is most likely applicable to the theme of hair salons. However, this may be a programming area that other cities should consider exploring. Notably, the most major gap in this research project is the lack of a perspective from indigenous organizations. The research team made over 40 attempts (emails and phone call) to reach out to various indigenous service providers within Brantford. Unfortunately, the non-profit sector in general and indigenous organizations, in particular, are facing significant resource challenges and sitting for an interview with scholars is not always possible given the sectors main priority is helping clients. Future researchers should specifically examine the relationship between place and IPV from an indigenous perspective to add further insights.

Despite these limitations, the study was able to garner some informative insights into how the social service sector in Brantford is using the unique elements of places and placemaking to support victims and reduce incidents of IPV. Within the home of victims, participants explained how their agencies used placemaking approaches to try to create a safe space for victims that also feels safe to them. These approaches focused on interventions with offenders to attempt to reduce the likelihood that they would re-offend and to teach victims strategies to employ if they were faced with future situations of IPV.

For victims that chose to leave the home and enter the women's shelter, placemaking was used to create an environment where the former victims were safe and felt safe. The creation of a

place of safety, allowed victims and their families, to embark on a journey of recovery. Before women could access services, like the women's shelter, they needed to be reached and informed of the services available. The Hairspray program took advantage of the way place is experienced by women in hair salons to inform women of the services available within the community. Hair salons are predominately occupied by women and hairdressers engage in open conversation with their clients, creating a comfortable environment for disclosure of IPV.

The discomfort offenders feel while in jail, made prison an ideal place to reach out to some perpetrators of IPV and encourage them to access services. Social service agencies attempted to do this; unfortunately, resource limitations meant it was not always possible. Another justice system environment, the courthouse, was also a theme of the research. Within the court, setting conflict occurs creating an environment where victims experienced trauma and safety concerns. The social service sector and justice system, attempted to both address the trauma victims were feeling and to provide mechanisms to ensure their safety. Finally, the school was a place where children who witnessed IPV would act on the trauma they were undergoing. Here the social service sector worked with school systems to provide mechanisms for students to process their experiences and ultimately break the cycle of violence often associated with IPV.

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Conclusion

By Anthony Piscitelli

This dissertation makes several significant contributions to the study of crime. Firstly, as laid out in the first article, *Emerging opportunities for geographers to explain the spatial distribution of crime*, it contributes by exploring the gaps in the crime literature that can be addressed by geographers. In particular, it demonstrates that geographers have not given Social Disorganization Theory (SDT), Broken Windows Theory (BWT), and Routine Activity Theory (RAT) adequate attention, though this is changing over the past ten years. This article also conceptually introduces the questions answered in the other four articles in this dissertation.

The second article, *Connecting social disorganization theory to broken windows and routine activities*, contributes an integration of SDT, BWT, RAT, and Ecological (Dis)advantage into a single conceptual framework. SDT, BWT, and RAT represent the three most prominent ecological theories of crime, while Ecological (Dis)advantage is a new approach introduced by the sociologist St. Jean (2007). His work demonstrates that both SDT and BWT are inadequate in fully explaining the spatial distribution of crime. According to St. Jean (2007) offenders reasoning for committing crimes in specific areas is not adequately considered by these theories. Ecological (Dis)advantage postulates that offenders choose the location where they commit crimes with a focus on avoiding being caught. This approach provides a key link between SDT, BWT, and RAT in this article.

The third article, *Spatial regression of juvenile delinquency: Revisiting Shaw and McKay,* contributes a re-examination of Shaw and McKay's (1969) seminal work on SDT using modern statistical techniques. The results demonstrate that Shaw and McKay's findings related to

deprivations causal relationship with delinquency are robust. Each of the variables tested by Shaw and McKay using the 1927 to 1938 dataset, families on relief, median monthly rent, homeownership rates, and rates of foreign-born and minority heads of households had a statistically significant relationship with juvenile delinquency. However, distance from the central business district is no longer related to delinquency when it is included in the models with the other variables as controls. These findings demonstrate that it is not proximity to the downtown that causes delinquency, but rather the concentration of other variables causing deprivation that is causal.

The fourth article, *The social disorganization of intimate partner violence* contributes a conceptual interpretation of how SDT explains concentrations of IPV within neighbourhoods. This article demonstrates that SDT provides a useful framework for explaining the concentration of IPV in neighbourhoods through the creation of a concept map. While many individual elements of this concept map were created based on findings from empirical research, validating this concept map using quantitative and qualitative research would be a valuable next step. Indeed, that was my original intent with the fifth and final article, however, as was previously explained, my research took an unexpected different direction.

Finally, the fifth article, *Distinct places to address intimate partner violence* contributes by exploring how place and placemaking are being used in Brantford to reduce and prevent IPV, based on interviews with 12 employees of social service providers. Of the six key questions explored, question four focussing on historical developments of the city of Brantford emerged as the central focus of the article:

3) Some of my background research on the City of Brantford suggests there are some historical events that may have impacted the development of the city in ways related to

> IPV. Are there any historical developments in Brantford that you think may be related to the higher rates of IPV today? Probes: The closure of the Massey Ferguson Plant, the Mohawk Institute Residential School in Brantford, The opening of Casino Brantford.

This question was expected to lead to the discovery of conceptual linkages between the concept of place and concentrated economic disadvantage as explained by SDT and perhaps also Ecological (Dis)advantage. These expectations were developed during the year I spent working for the City of Brantford as the Safe Brantford Administrator. During that time I learned a great deal about the city's historical development and existing challenges. Based on this experience I suspected that the closure of the Massey Ferguson Plant, the Mohawk Institute Residential School, and the opening of Casino Brantford had an impact on crime and victimization in Brantford. If these issues are indeed impacting rates of IPV in the city, it was not apparent in the results of these interviews. However, this may be a reflection of the professions of the people who participated in interviews. Interviews with those involved in crime prevention or planning, such as politicians or urban planners, may have led to more comments on meso-level issues. Indeed, as I previously mentioned, my own experience in a crime prevention role suggested these historical issues as being an important factor. Indeed, as discussed in article number five, numerous studies using quantitative and qualitative techniques demonstrate a clustering of IPV within neighbourhoods (Benson, Fox, DeMaris, & Van Wyk, 2003; Browning, 2002; Burke, O'campo, & Peak, 2006; Burke et al., 2006; Cunradi, Mair, Ponicki, & Remer, 2011; DePrince, Buckingham, & Belknap, 2013; Frye, 2007; Gracia & Herrero, 2007, 2007; Gracia, López-Quílez, Marco, Lladosa, & Lila, 2014; Gracia et al., 2014; Gracia & Tomás, 2014; Kiss et al., 2012; Pinchevsky & Wright, 2012; St. Jean, 2007; Thompson & Gartner, 2014). This clustering strongly suggests factors at the neighbourhood level are impacting the distribution of IPV

throughout the city of Brantford. While factors at the meso-level are likely an important explanation to the clustering of IPV within Brantford these results were not raised in detail in the interviews conducted for this study. Future researchers should revisit the Massey Ferguson Plant, the Mohawk Institute Residential School, and the opening of Casino Brantford specifically in Brantford or as these general types of issues related to victimization in cities, perhaps through a broader base of interviewees?

The six themes that arose in the final interview, home, the women's shelters, courts, schools, hair salons and prisons, demonstrated that place and placemaking have an important role to play in addressing IPV. This is an important area for study, which is significantly underdeveloped in the literature. The discoveries in the final article forced a reconsideration of the conceptual linkages between the articles. Originally the intent was to link the articles using a flowchart approach (Figure #2), with article number five as the key linkage between articles two, three, and four. With article five now focused on place within micro-level spaces, as opposed to the meso-level, the article is no longer a linkage between these three articles. Instead, I conclude with a revised conceptual connection involving a Venn diagram (Figure #4). Using this approach, article number one serves as a key linkage between the other four articles. This article still sets up the other articles by describing gaps in the literature, with each of the other articles addressing a small segment of these gaps. Article two, provides overlapping content with articles three and four, as each of these articles examine SDT from different perspectives. Article four overlaps with article five as both articles address the issue of IPV. This conceptual linkage between articles is not as strong as originally envisioned. However, I believe, the contribution of

the final article offers a unique perspective that is worth the disruption in flow to the overall dissertation.

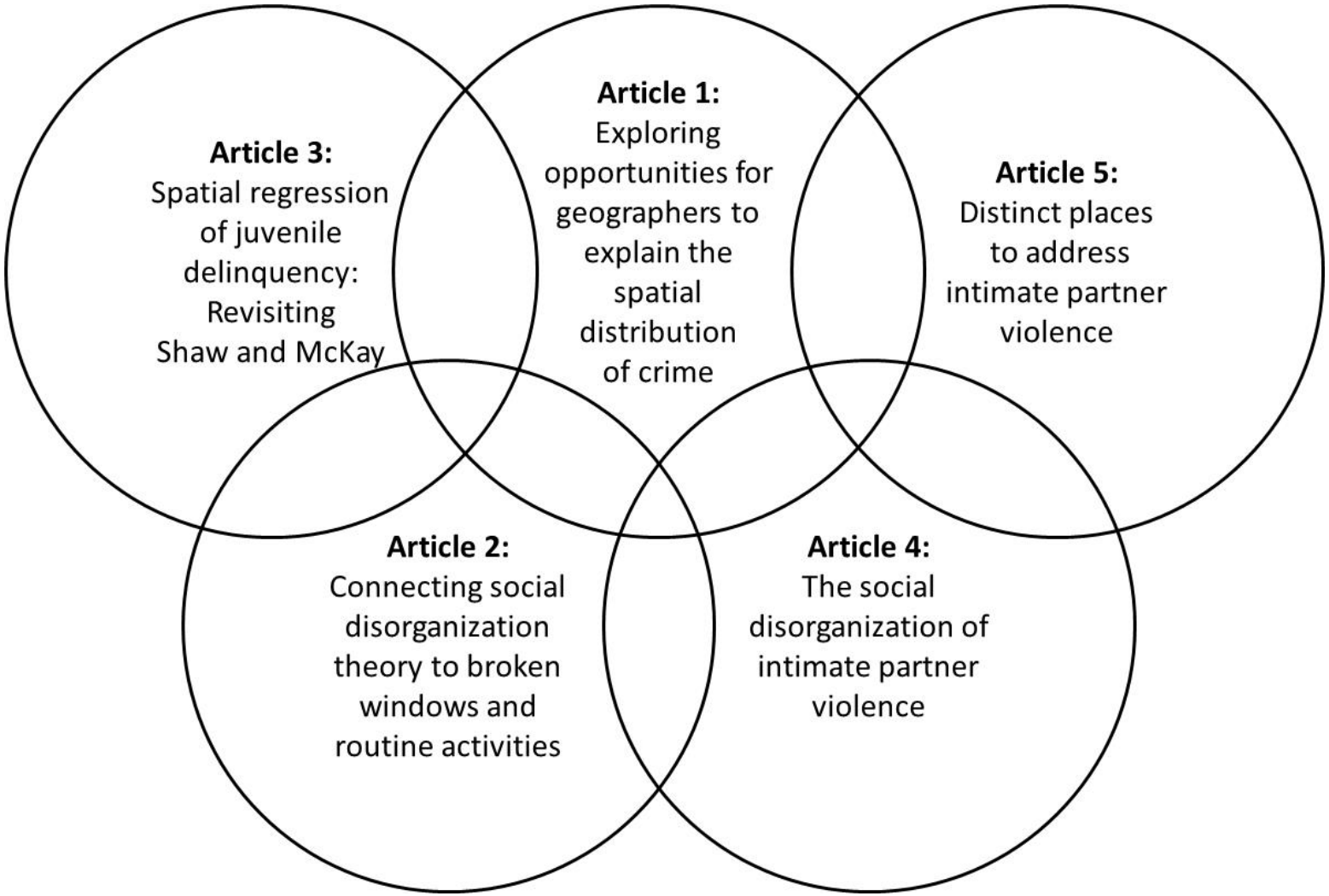

Figure #4: The Venn Diagram Connection Between Articles

While a different direction was originally anticipated for the fifth article, the results illustrate how a geographer's conceptual understanding of the concept of place provides a unique approach to the study of crime. Geographers consider place as encompassing the impact that people have on the physical space and the practices that occur in the space (Cresswell, 2004; Gieseking, Mangold, Katz, Low, & Saegert, 2014; Matthews & Herbert, 2008; Pred, 1985). Using the concept of place and the related concept of placemaking, it was possible to demonstrate how social service agencies were taking advantage of the unique elements offered by places to address IPV and how these same agencies were attempting to change places to prevent IPV and protect victims.

St. Jean (2007) similarly shows how offenders take advantage of specific elements of spaces to commit crimes without getting caught. Since these actions are to the disadvantage of victims, he frames his theoretical contribution as Ecological (Dis)advantage. Article five's examination of social service agencies within Brantford demonstrates that it is not only offenders that can take advantage of the unique elements of spaces. The concept of place actually has a great deal to offer with respect to the prevention of crime. Future research should continue to explore ways in which place is being used to protect victims. Theoretical reflection should consider how to react to the disadvantages spaces face, as identified by St. Jean (2007), to re-shape them to prevent harm.

In addition to these theoretical contributions, this dissertation also suggests opportunities for practical applications. The research in this dissertation confirms the importance of broad social efforts addressing social disorganization to prevent crime. The importance of reducing concentrated economic disadvantage has been clearly understood since the seminal work of

Shaw and McKay (1942, 1969), yet society still has room to grow. Programs designed to alleviate poverty, particularly amongst children, are a natural starting point. Work designing cities such that poverty is dispersed throughout a city, as opposed to concentrated in specific areas is also worthy of significant effort. In this regard, there may be some benefit in considering concentrations of high net worth families in specific areas as problematic, as these concentrations remove the possibility of a more equitable distribution of income throughout an entire city.

Addressing neighbourhood conditions are also worthwhile as part of a specific effort to prevent IPV as well. In this regard, attitudes towards women deserve a specific focus. Shaw and McKay (1942, 1969) introduced the concept of cultural transmission of deviant values and it appears these same mechanisms are in place within neighbourhoods spreading negative attitudes towards women. Further validation work confirming negative attitudes towards women cluster in areas and perpetuate themselves is likely needed to fully confirm this relationship. Alongside this research, efforts should be made to work with practitioners to implement methods to disrupt the transmission of these attitudes. Frye (2007) shows personal attitudes towards IPV relate to the likelihood of someone intervening if they become aware of a victim experience IPV, demonstrating that attitudes can have an impact on actions. Sexual assault researchers used similar findings to encourage men to intervene in sexual assaults as bystanders by showing their intervention are socially acceptable (Fabiano, Perkins, Berkowitz, Linkenbach, & Stark, 2003). Similar work should be explored to address IPV at the neighbourhood level.

Brantford's program in hair salons, where hairdressers are trained to recognize the signs of IPV and support victims in accessing resources is an innovative approach to reducing harm. The program in Brantford is already expanding to estheticians. This approach warrants

expansion beyond Brantford to other cities in Canada. Some work is being done in this regard through the Cut It Out Canada program but wider recognition of the benefit of this approach could increase the uptake. Alongside this program expansion, evaluations should be conducted to confirm the program is effective, and ascertain the best methods for training hairdressers in approaching and referring women to services.

Considering all the various inter-related contributions of this dissertation, several broad conclusions can be made. Foremost, Geographers belong in the intellectual space devoted to the study of crime and victimization. Geographers' statistical techniques provide tools, which can help explain the spatial distribution of crime by distinguishing causal variables from those with spurious relationships. Geographers' interdisciplinary approach provides insights, which can shape theoretical debates about the ecological approaches to crime. Finally, Geographers' conceptual understanding of the concept of place provides a unique perspective on the world, which can suggest new solutions to addressing crime.

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